PUBLIC NOTICE

CITY OF BERKLEY, MICHIGAN
REGULAR MEETING OF THE CITY PLANNING COMMISSION

Tuesday, February 22, 2022
7:00PM – City Hall Council Chambers
Information: 248-658-3320

CALL TO ORDER
PLEDGE OF ALLEGIANCE
ROLL CALL
APPROVAL OF AGENDA
APPROVAL OF MINUTES – *Meeting minutes of January 25, 2021*
COMMUNICATIONS
CITIZEN COMMENTS

OLD BUSINESS

1. **PSP-02-21; 2400 Greenfield Rd – New Construction of Office Building:** T. Fought & Associates, on behalf of 2400 Trust, 2400 Greenfield Rd, Parcel #25-18-301-031, is requesting site plan approval for the development of a new six-unit office building in the Greenfield District.

2. **PSP-03-21; 3462 – 3478 Greenfield Rd – New Construction of Office Building:** T. Fought & Associates, on behalf of North Green Trust, 3462-3478 Greenfield Rd, Parcels #25-07-355-013, #25-07-355-014, #25-07-355-015, is requesting site plan approval for the development of a new six-unit office building in the Greenfield District.

3. **DDA Guidelines:** Discussion to create DDA Design Overlay District and adopt ordinance language related to the DDA Guidelines, as well as discussion on the Architectural Design Checklist.

NEW BUSINESS

4. **PSP-02-22:** 2222 W. Eleven Mile. Sketch Plan for proposed building renovation for marijuana provisioning center.

LIAISON REPORTS
COMMISSIONER / STAFF COMMENTS
ADJOURN

Notice: Official Minutes of the City Planning Commission are stored and available for review at the office of the City Clerk. The City of Berkley will provide necessary reasonable auxiliary aids and services, such as signers for the hearing impaired and audio tapes of printed materials being considered at the meeting, to individuals with disabilities at the meeting upon four working days notice to the city. Individuals with disabilities requiring auxiliary aids or services should contact the city by writing or calling: City Clerk, ADA Contact, Berkley City Hall, 3338 Coolidge, Berkley, Michigan 48072, (248) 658-3300.

You can watch the meeting on Channel 10 for both Comcast and WOW, at http://www.youtube.com/CityofBerkley or http://www.berkleymich.org/livestream.

THE REGULAR MEETING OF THE BERKLEY CITY PLANNING COMMISSION WAS CALLED TO ORDER AT 7:01 PM, JANUARY 25, 2022 AT BERKLEY CITY HALL BY CHAIR KRISTEN KAPELANSKI.

The minutes from this meeting are in summary form capturing the actions taken on each agenda item. To view the meeting discussions in their entirety, this meeting is broadcasted on the city's government access channel, WBRK, every day at 9AM and 9PM. The video can also be seen, on-demand, on the city's YouTube channel: https://www.youtube.com/user/cityofberkley.

PRESENT:	Kristen Kapelanski	Martin Smith
	Joe Bartus	Lisa Kempner
	Greg Patterson	Julie Stearn
	Mark Richardson	Shiloh Dahlin
	Daniel Petrosky	
ABSENT:	None	
ALSO, PRESENT:	Megan Masson-Minock, Interim Community Development Director	
	Grant Jeffries, 257 Vester St, Ferndale	
	Daniel Stakhiv, 2240 Iroquois, Detroit	
	Doug and Laura Respeck, 2413 Cambridge, Berkley	

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APPROVAL OF AGENDA

Motion by Commissioner Kempner to approve the agenda. Motion supported by Commissioner Patterson.

AYES: Bartus, Dahlin, Kempner, Patterson, Petrosky, Stearn, Richardson, Smith, Kapelanski
NAYS: None
ABSENT: None

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APPROVAL OF MINUTES

Motion by Commissioner Patterson to approve the minutes from the regular Planning Commission meeting on November 23, 2021 and supported by Commissioner Bartus.

AYES: Bartus, Dahlin, Kempner, Patterson, Petrosky, Stearn, Richardson, Smith, Kapelanski
NAYS: None
ABSENT: None

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COMMUNICATIONS

Planning & Zoning News & Michigan Association of Planning workshops flyer and magazine

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CITIZEN COMMENTS

There were no comments from the public in person or via email.

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DRAFT

OLD BUSINESS

1. **DDA Guidelines:** Discussion to create DDA Design Overlay District and adopt ordinance language related to the DDA Guidelines, as well as discussion on the Architectural Design Checklist.

Interim Community Development Director Masson-Minock summarized the Carlisle Wortman memo on this subject that was in the packet. She reviewed four questions from the Planning Commission and examples from other communities. In terms of overall advice from best practices, Carlisle Wortman recommends having both guidelines and standards. Standards are what you absolutely want and guidelines are what you would like to have, with incentives if wanted. Standards should be in zoning ordinance so they are enforceable. She recommended a separate workshop to discuss this in detail.

There was no audience comment on the design guideline discussion.

Chair Kapelanski stated she liked the Troy example which would be the minimum the Planning Commission could do. There also could be a full-blown code rewrite of three different districts, depending on time and budget. She asked if the Planning Commission wanted to land somewhere in the middle between the two options?

Commissioner Kempner stated that there needs to be some degree of sitting down and rewriting the zoning. She suggested workshops or a sub-committee to help with ordinance and guidelines.

Commissioner Patterson stated that he agreed with Commissioner Kempner, stating we might as well get the code up to where it needs to be.

Commissioner Dahlin stated that she also agrees with a full rewrite. There was so much time on the Master Plan. There are legitimate loopholes in the zoning, which needs to be addressed.

Commissioner Richardson wanted clarification on what the Planning Commission is being asked to do here. Is the Planning Commission being asked to rewrite the zoning that pertains to the DDA areas, coming up with a plan of applying them? Interim Community Development Director Masson-Minock stated that the Planning Commission is being asked to decide how DDA guidelines are to be enforced in some way through the Zoning Ordinance. She felt that the key information missing was what are the things that are important to the Planning Commission.

Chair Kapelanski reiterated Commissioner Richardson that what we are trying to decipher is whether the Planning Commission wants to have something more subjective than a prescriptive layout. She expressed options of staying in the gray area, or going more prescriptive with a detailed explanation, or a list of requirements to give to applicants, or to go somewhere in the middle where we pick a few things.

Commissioner Kempner stated that the Planning Commission would have to get into the details, because there are some things the Ordinance does not allow, even if we say this is how the Planning Commission would like it to look. Flexibility is good, but Commissioner Kempner felt that they do have to address those issues.

Chair Kapelanski stated that one of the things that was important in the development of design guidelines is the transition from some of these more mixed-use concepts to adjacent residential developments, making sure that was proper buffering and screening. She felt it was best to come at it from a middle of the road approach.

Co-Chair Smith stated that Troy has a very particular checklist and he does not know if we want to get that particular. He stated that Berkley does not have layers of property along one road, like Troy. We have our commercial district then single family. This is a good start to see Troy's example and to base discussion off of that example.

Chair Kapelanski stated that the Planning Commission should focus on the bigger things using setbacks, that determine how the site starts, and where it goes, then the little things are a more subjective standard.

Interim Community Development Director Masson-Minock suggested to do a survey for the Planning Commission in February and come back in March for a workshop session.

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DRAFT

NEW BUSINESS

1. **PRZ-01-21:** 2465 Cambridge Road, 2475 Cambridge Road, 2466 Columbia Road, and 2476 Columbia Road. Request to rezone #25-17-353-002, #25-17-353-001, #25-17-353-016, #25-17-353-015 from Coolidge District to Gateway District.

Interim Community Development Director Masson-Minock summarized what is provided in the packet and the rezoning of four parcels, currently used for two duplexes. She reviewed the land use, zoning and future land use designation of the subject parcels and the surrounding area. She mentioned that the property owner owns the property to the south, which is zoned Gateway district. She noted that the intent and land use of the existing Coolidge district and the proposed Gateway district are very close. She stated that while the applicant has indicated interest in building a multiple-family development on these parcels and those in common ownership to the south, neither the proposed zoning district nor the current zoning districts allow multiple family buildings, only residential in upper stories of multi-use buildings. She stated that the rezoning implemented the Master Plan. She summarized the recommended finding of facts to submit to City Council.

Applicant
Grant Jeffries
Five- Eighths Architecture
Ferndale MI

The duplexes would continue as duplexes for the time being. This application is trying to position themselves for future development of a multiple-family building. Wayne Wudyka, the property owner, stated that they would like to have a consistent zoning between the parcels, and come into the future when we do with a project and not have to ask for rezoning later.

There were no comments from the public in person or via email.

The Planning Commission discussed the rezoning, and how it is a recommendation to City Council.

Commissioner Richardson asked if the southern boundary of the DDA was on Coolidge. The DDA boundary goes along Coolidge to 11 Mile, making the subject parcels within the DDA district and subject to the DDA design guidelines.

Chair Kapelanski stated that this is following the Master Plan, which matches the future land use map, making it straightforward. Commissioner Kempner stated that the Future Land Map already encompasses all of those properties. Chair Kapelanski stated that as of right now the Future Land Map does not match the zoning. Commissioner Kempner stated that what would be the Gateway Corridor is not necessarily the exact same as what the Gateway District we have right now. This rezoning would result in change to the Gateway District boundaries to match the Master Plan.

Interim Community Development Director Masson-Minock stated that by changing this from the Coolidge District to the Gateway District, the Planning Commission is implementing the area that is envisioned for Coolidge District. Then, the intentions of these districts will need to change to match the Master Plan. Commissioner Richardson confirmed that from this action the Coolidge district would be consolidated. He stated that the Planning Commission was looking at a potential use that is compatible with the likely zoning of that area.

Co-Chair Smith stated that if rezoning did occur, any of the particular uses could go in, not just multi-family. There are no negatives of the rezoning.

Co-Chair Smith motioned to recommend approval of PRZ-01-21 to City Council with the findings of fact in the letter from City staff, motion supported by Commissioner Richardson.

AYES: Bartus, Dahlin, Kempner, Patterson, Petrosky, Stearn, Richardson, Smith, Kapelanski
NAYS: None
ABSENT: None

DRAFT

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2. **PSP-01-22:** 3737 Twelve Mile. Sketch Plan for proposed multiple family development.

Interim Community Development Director Masson-Minock summarized the discussion she, City Manager Baumgarten and DDA Executive Director McGuiness had with applicant previously. She described the sketch plan process and the specific question for the Planning Commission on the front yard setback for this proposal.

Applicant
Daniel Stakhiv

The primary use is apartments or townhouses. The Zoning Ordinance requires a zero-foot front yard setback unless the Planning Commission gives an exception. He would like to have small front yards, but without the setbacks, he has to put the buildings right up to the sidewalk. He plans to submit site plan approval within the next month.

Each Commissioner gave their setback opinion and any additional comments.

Co-Chair Smith stated that this use is a great idea on Twelve Mile. The buffer is a good idea and would like to see a bit more than two to three feet setback. The proposed setback is a good idea.

Mr. Stakhiv stated that the side setbacks on the east side are intended for gas meters, and the west side so someone could build on there.

Commissioner Richardson agreed with Planning Commissioner Smith, noting that other places on that intersection have small setbacks.

Commissioner Dahlin agreed with the front setback. Brings up the back setback and dumpster enclosure, as well as the overparking of four spaces.

Commissioner Kempner agreed with the idea of the front setback. She mentioned that what the ordinance says about a front setback is what she does not like. She also agreed with the overparking. She mentioned that in the DDA Design Guidelines it calls for the third story of a building to be setback so it is not so overwhelming.

Commissioner Patterson agreed that having a bigger setback is a good idea. He was in favor of getting rid of additional parking spaces and felt that people can park on the street, if needed.

Commissioner Stearn agreed with the setback.

Commissioner Petrosky stated the setback makes complete sense. He would be in favor of a larger setback, if possible.

Commissioner Bartus agreed with the set back.

Chair Kapelanski is in 100% agreement on the setbacks, and advised going back further with the setbacks.

Mr. Stakhiv stated that he will put a fence and curb to stop circular traffic. The intention is for units with three bedrooms and three bathrooms. Additional recommendations from the Planning Commission were to not include the top black box on the dumpster, include bicycle racks, and more greenery.

3. 2022 Planning Commission Calendar Dates

Commissioner Kempner motioned to approve the meeting 2022 calendar dates, motion supported by Commissioner Patterson.

AYES: Bartus, Dahlin, Kempner, Patterson, Petrosky, Stearn, Richardson, Smith, Kapelanski
NAYS: None
ABSENT: None

DRAFT

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LIAISON REPORTS

Commissioner Petrosky stated that the Art Bash applications are officially on the website, and the permit process is being worked out with the City. They plan to move it from Buckingham to Coolidge. The Berkley Street Art Festival committees have meet and have begun planning.

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STAFF/COMMISSIONER COMMENTS

Chair Kapelanski commented on how she loved being involved with the sketch plan and the Planning Commission agreed that the sketch plan option should be encouraged.
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ADJOURNMENT

Motion to adjourn by Commissioner Richardson. Motion supported by Commissioner Dahlin.

AYES:	Bartus, Dahlin, Kempner, Patterson, Petrosky, Stearn, Richardson, Smith, Kapelanski
NAYS:	None
ABSENT:	None

With no further business, the meeting was adjourned at 8:21 p.m.

DRAFT

FIVE - EIGHTHS

2321 WOLCOTT - FERNDALE - MICHIGAN - 48220
WWW.FIVE-EIGHTHS.COM
248 - 891 -2737

February 1, 2022

Kristen Kapelanski
Chairperson, Planning Commission
City of Berkley
3338 Coolidge Hwy.
Berkley, MI 48072

Cc: Megan Masson-Minock, Interim Community Development Director
Matthew Baumgarten, City Manager

Chairperson Kapelanski,

We wanted to start by thanking you and the other Commissioners for voting to recommend approval to the City Council of our Rezoning Application for the lots along Coolidge Highway at the January Planning Commission Meeting last week. Additionally, the work that you and the Commissioners, along with Megan Masson-Minock, put in to adopt the new Master Plan that was approved last fall. As a business/landowner in the city and an architect that has several projects going on in the city currently, we are both excited about the implications of the new Master Plan and the effect it will have on shaping Berkley in the years to come.

We are writing today regarding the discussion that happened at the meeting (unrelated to our rezoning application) about the DDA guidelines for the overlay district and the larger-picture discussion that resulted as it relates to the zoning ordinance and proposed changes that the commissioners would like to explore in the coming months. With that in mind, there are some items in the ordinance that we have noted during our preliminary zoning research (for the future multi-family development we are exploring) that seem to be in conflict with the new master plan and could hinder the types of developments that the city seems to be trying to attract Those items are:

- The current zoning ordinance does not allow for first-floor dwelling units in the Gateway District, but the Master Plan states on page 36 that multiple-family buildings should "be added to [the Gateway Corridor district] if not allowed presently". Therefore, we are hoping that the Planning Commission would consider a zoning amendment that would allow for first floor dwelling units and/or multi-family housing in this district as a by-right use.

- The current zoning ordinance limits the number of units allowed in any multi-family development to one "room" per 500 square feet of parcel. Furthermore, it defines a "room" as any room other than a kitchen or bathroom, but then defines a studio apartment as one "room" but a one-bedroom apartment as three "rooms". We feel that this equation should either be eliminated entirely from the ordinance (and thereby allow maximum building heights, minimum setbacks, minimum size of units, etc. to define the maximum density of a lot to be used for multi-family housing) or revise the definition of a one-bedroom unit to be two "rooms" instead of three, as it should only have one additional room than a studio apartment (the bedroom).

- The current off-street parking requirements for multi-family housing (two spaces per dwelling unit) are pretty restrictive and seem to clash with the desire for a more walkable, bikeable city as outlined in the master plan. We feel a tiered approach (i.e., one space for a studio apartment, 1.5 spaces per one-bedroom apartment, and two spaces for a two-bedroom apartment) may be more appropriate for the types of developments the city is trying to attract. For example, Clawson utilizes this approach for their off-street parking requirements for multi-family housing, and Ferndale requires 1.5 spaces per unit.

FIVE - EIGHTHS

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248 - 891 -2737

- Related to the comment above, the shallow nature of the lots along Coolidge Hwy in the Gateway Corridor district makes it difficult to provide the current parking requirements for a multi-family housing development as a buffer between the building and the adjacent single-family lots on side streets like Harvard, Cambridge, and Columbia. Page 56 of the Master plan references this hardship specifically, and has the following recommendations as potential solutions:

    - **Re-purpose residential property** - Commercial corridor properties can be expanded by re-purposing adjacent residential property. The "Potential Corridor Expansion/Transitional Buffer" future land use category indicates where residential property could transition to provide additional space for corridor properties. Such expansions should be considered on a case-by-case basis as part of a zoning approval process. The main part of that process is to ensure future commercial expansion does not adversely impact the adjacent residential parcels.

    - **Change parking regulations** - Relaxing parking requirements is appropriate when other parking options may be possible - municipal parking lots or shared parking - such as in the Downtown.

Thank you for your time and consideration. Hopefully this letter can shed some light on some of the specific areas of the ordinances that developers are looking at that may need some updating in order to foster the type of developments outlined in the approved master plan.

Sincerely,

Grant Jeffries
Principal Architect, Five-Eighths Architecture

&

Wayne Wudyka
CEO, The Huntington Company

Proposed:
MEDICAL OFFICE BUILDING

2400 Greenfield Rd.
Berkley, MI 48702

Owners:
2400 TRUST
1359 Davis Ave.
Birmingham, MI 48009

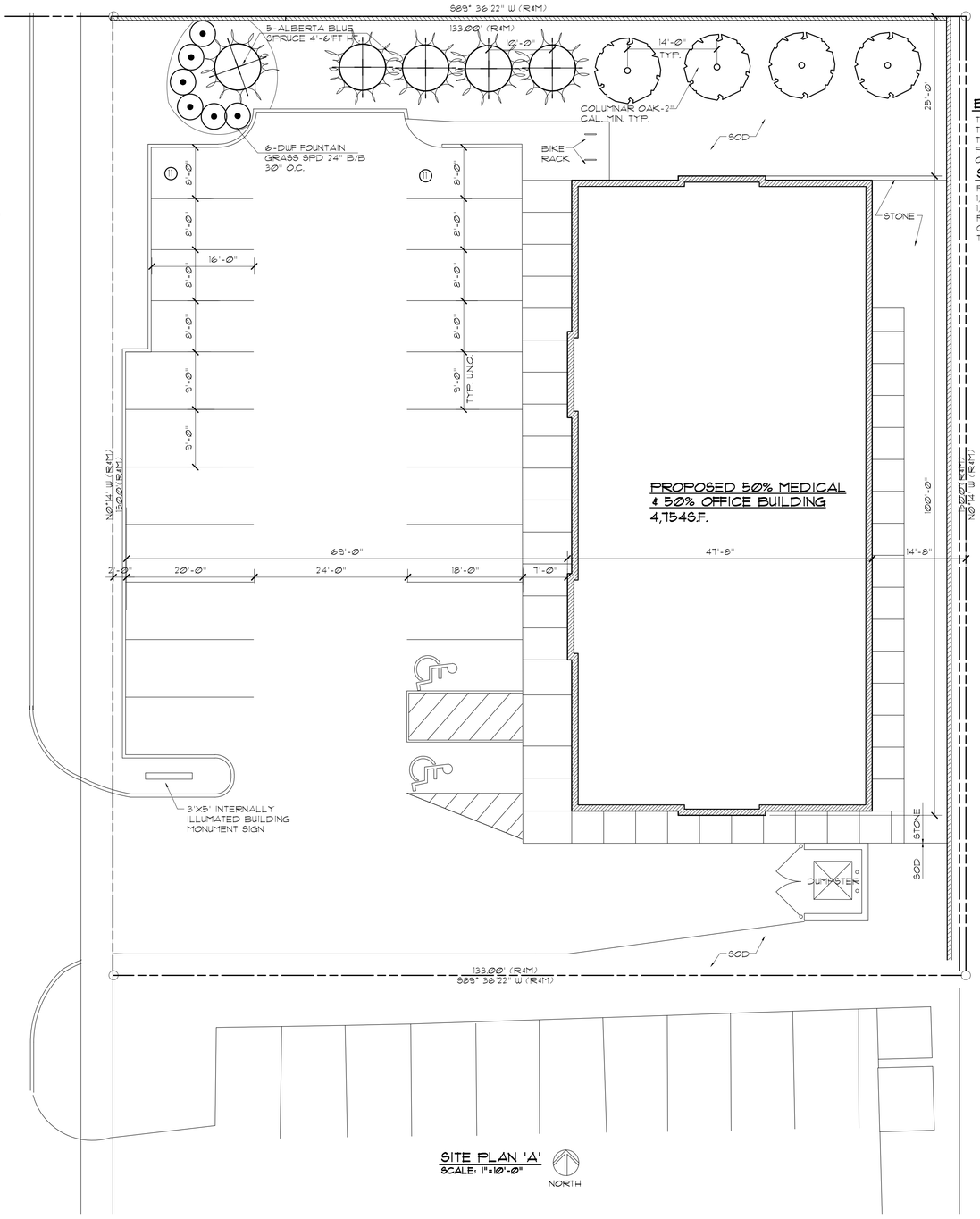
Architect:
T. FOUGHT & ASSOCIATES LLC
24045 Woodland Dr.
Southfield, MI 48076
P: (248)514-7612
Project No. T2021014

CODE INFORMATION:
BUILDING CODES:
- 2015 MICHIGAN BUILDING CODE -ICC/ANSI A117.1-2009
- 2015 MICHIGAN PLUMBING CODE
- 2015 MICHIGAN MECHANICAL CODE
- 2017 NATIONAL ELECTRICAL CODE (W/ MICHIGAN AMENDMENTS)
- 2015 MICHIGAN UNIFORM ENERGY CODE PART 10A
- ANSI/ASHRAE/IESNA STANDARD 90.1
- 2012 INTERNATIONAL FIRE CODE W/ AMENDMENTS

SCOPE OF WORK
THIS PROJECT INVOLVES NEW BUILD FOR A MEDICAL OFFICE BUILDING.

SHEET INDEX

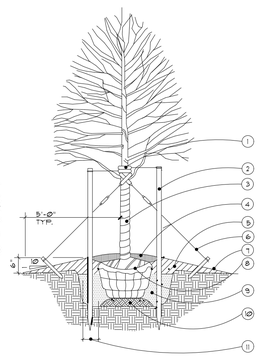
C-1	TITLE SHEET, LOCATION, SITE, & LANDSCAPE PLANS
SP-1	DEMOLITION & ENGINEERING SITE PLAN
SP-2	DIMENSIONAL PLAN
SP-3	PAVING & GRADING PLAN
SP-4	UTILITIES PLAN
SP-5	SOIL EROSION & SEDIMENTATION CONTROL PLAN
SP-6	SITE DETAILS & DETENTION CALCULATIONS
SP-7	K&I DETAILS
1 OF 1	STORM DRAIN NOTES AND DETAILS
1	SITE SURVEY
A.1	FLOOR PLAN & ELEVATIONS
A.2	COLORED ELEVATIONS & BUILDING MATERIALS
E.1	PHOTO METRIC PLAN



SITE PLAN 'A'
SCALE: 1"=10'-0"
NORTH

BUILDING DATA:
TOTAL SQUARE FOOTAGE EXCLUDING EXTERIOR WALL THICKNESS=4,462S.F.
TOTAL USABLE AREA: 70%+10% MODIFIED=4,462X60%=2,678S.F.
PROPOSED USE 50% (1,339S.F.) MEDICAL OFFICE & 50% (1,339S.F.) OFFICE

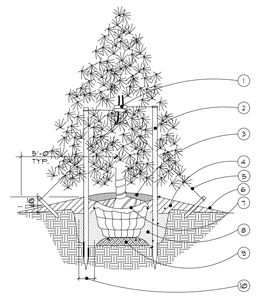
SITE DATA:
PARKING REQUIRED:
1,339S.F. OFFICE (1) SPACE PER 225=1,339/225=6
1,339S.F. MEDICAL (1) SPACE PER 100= 1,339/100=14 SPACES
PARKING REQUIRED:20 PARKING PROVIDED: 22
CREDIT 2 PARKING SPACE FOR BIKE RACK OF 4.
TOTAL SPACES PROVIDED 22+2=24



NOTES:
- STAKE TREES UNDER 4" CALIPER
- GUY TREES 4" CALIPER & OVER
- CONTRACTOR TO VERIFY PERCOLATION OF PLANTING PIT PRIOR TO INSTALLATION
- SET TOP OF BALL 6" ABOVE FINISH GRADE
- SET STAKES VERTICAL & EVENLY SPACED
- STAYS OR GUYS TO BE SET ABOVE 1ST BRANCH

1. 1/2" DIA. BLACK RUBBER HOSE W/ GUY CABLE (2) # 11 GALV. WIRE (3 PER TREE) W/ GALV. TURNBUCKLE
2. 2" x 2" HARDWOOD STAKES TO EXTEND 18" BELOW TREE PIT IN UNDISTURBED SOIL
3. TREE WRAP
4. SHREDDED BARK MULCH 3" DEPTH (6'-0" DIA.)
5. AMENDED SANDY LOAM TOPSOIL
6. GUYS AT 60° ANGLE
7. FIN. GRADE WITH LAWN SLOPED AWAY FROM TREE
8. REMOVE BURLAP & CUT TWINE FROM TOP 1/3 OF BALL
9. PLANT MIX
10. SCARIFY SOIL TO 4" DEPTH AND RECOMPACT
11. 12" MIN. BETWEEN ROOTBALL AND EDGE OF PLANT PIT

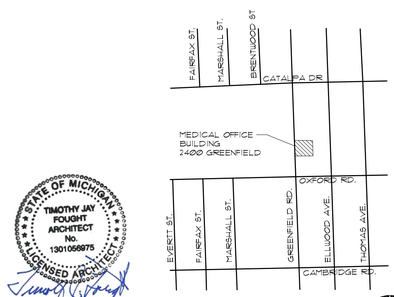
DECIDUOUS TREE DETAIL
NTS



NOTES:
- STAKE ALL EVERGREEN TREES UNDER 12' HIGH
- GUY ALL EVERGREEN TREES 12' HIGH AND OVER
- NEVER CUT CENTRAL LEADER
- PRUNE ONLY TO REMOVE DEAD OR BROKEN BRANCHES
- SET STAKES VERTICAL AND EVENLY SPACED

1. 1/2" DIA. BLACK RUBBER HOSE W/ GUY CABLE (2) # 11 GALV. WIRE (3 PER TREE) W/ GALV. TURNBUCKLE
2. 2" x 2" HARDWOOD STAKES TO EXTEND 18" BELOW TREE PIT IN UNDISTURBED SOIL
3. SHREDDED BARK MULCH 3" DEPTH (6'-0" DIA) CONNECT BEDS WHERE POSSIBLE
4. AMENDED SANDY LOAM TOPSOIL
5. GUYS AT 60° ANGLE
6. FIN. GRADE SLOPED AWAY FROM TREE
7. SLIT BURLAP AND LEAVE TIED
8. PLANT MIX
9. SCARIFY SOIL TO 4" DEPTH AND RECOMPACT
10. 12" MIN. BETWEEN ROOTBALL AND EDGE OF PLANT PIT

EVERGREEN TREE DETAIL
NTS



LOCATION PLAN
SCALE: NONE
NORTH

STATE OF MICHIGAN
TIMOTHY JAY FOUGHT
ARCHITECT
No. 1301056975
LICENSED ARCHITECT

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PROJECT
MEDICAL OFFICE BUILDING
2400 GREENFIELD RD
BERKLEY, MI

SUBJECT
SITE PLAN

ARCHITECTS
T. FOUGHT & ASSOCIATES LLC
24045 WOODLAND DR, SOUTHFIELD, MI 48034
(248) 514-7612

ISSUED:
SITE PLAN APPROVAL
09/24/2021
01/21/2021

DRAWN	T.J.F.
CHECKED	T.J.F.
APPROVED	T.J.F.
BIDS	
CONSTR.	

DO NOT SCALE PRINTS - USE FIGURED DIMENSIONS ONLY

JOB NO.
T2021014

SHEET
C.1

MEDICAL OFFICE BUILDING

20 0 10 20 40

GRAPHIC SCALE 1"=20'

LEGEND

	AMERITECH		SIGNAL POLE
	WATER SHUT OFF		PUBLIC LIGHTING MH.
T	TELEPHONE RISER	E	ELECTRIC RISER OR METER
TH	TELEPHONE		CATHODIC PROTECTION
C.O.	SEWER CLEAN OUT		GUY WIRE
M	GAS METER		HIGH TENSION TOWER
	GAS VALVE /GAS MARKER		FLAG POLE
	MANHOLE (M.H.)		BOLLARD
	CATCH BASIN (C.B.)		STEEL COLUMN
	GATE VALVE IN WELL (G.V.W.)		MAILBOX
	FIRE HYDRANT		SIGN
	STORM MANHOLE (ST. MH.)	TRANS	ELECTRIC TRANSFORMER
	FENCE POST	EX.	EXISTING
	UTILITY POLE	PROP.	PROPOSED
	UTILITY POLE W/ LAMP EXTENSION		WATER FLOW INDICATOR

UTILITIES LEGEND

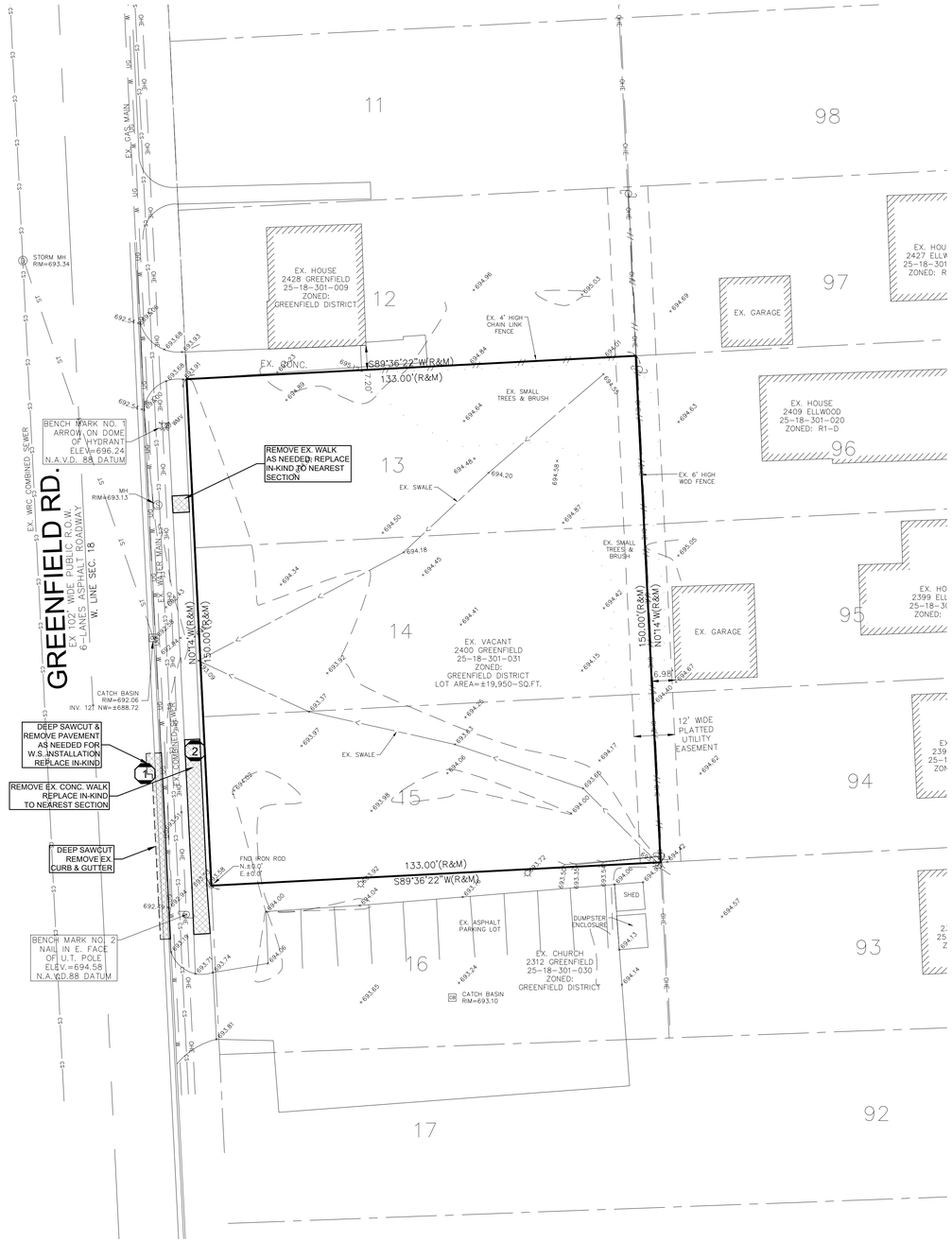
G G	GAS
SS SS	SANITARY (SAN)
CS CS	COMBINED (CS)
ST ST	STORM (STM)
GVW	WATERMAIN (WM)
OH OH	OVERHEAD WIRE
	UNDERGROUND CABLE
	EX. DITCH
	SWALE CENTERLINE
	EASEMENTS
	CHAIN LINK FENCE

DEMOLITION LEGEND

PROPOSED REMOVAL

PROPOSED ITEM REMOVAL

NOTE: ANY PAVEMENT REMOVED IN THE RIGHT-OF-WAY SHALL BE REPLACED IN-KIND OR AS DIRECTED BY THE R.C.O.C. INSPECTOR



MISS DIG TICKET #: A12560991


SITE
N
Catalpa Dr
Pierce Ave
Oxford Rd
Cambridge Rd
Meadowood Ave
Bonaire Ave
Bonaire Dr
Coral Gables Dr
Cedarcrest Ct
Cedarcrest Pl
Bonaire Pl
Bonaire Ct
Bonaire Cir
Bonaire Ln
Bonaire Rd
Bonaire Ter
Bonaire Trl
Bonaire Way
Bonaire Wy
Bonaire Xing
Bonaire Yd
Bonaire Zig
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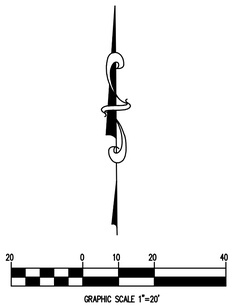


GRAPHIC SCALE 1"=20'

LEGEND

	AMERITECH		SIGNAL POLE
	WATER SHUT OFF		PUBLIC LIGHTING MH.
T	TELEPHONE RISER	E	ELECTRIC RISER OR METER
TH	TELEPHONE		CATHODIC PROTECTION
C.O.	SEWER CLEAN OUT		GUY WIRE
G	GAS METER		HIGH TENSION TOWER
GV	GAS VALVE /GAS MARKER		FLAG POLE
	MANHOLE (M.H.)		BOLLARD
	CATCH BASIN (C.B.)		STEEL COLUMN
GV	GATE VALVE IN WELL (G.V.W)		MAILBOX
	FIRE HYDRANT		SIGN
	STORM MANHOLE (ST. MH.)	TRANS	ELECTRIC TRANSFORMER
	FENCE POST	EX.	EXISTING
	UTILITY POLE	PROP.	PROPOSED
	UTILITY POLE W/ LAMP EXTENSION		WATER FLOW INDICATOR

UTILITIES LEGEND

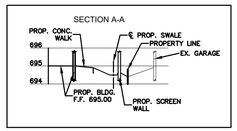
EXISTING		PROPOSED
G	GAS	
SS	SANITARY (SAN)	SAND BACKFILL
ST	STORM (STM)	
CS	COMBINED (CS)	CB
WV	WATER MAIN (WM)	
OHW	OVERHEAD WIRE	
UGC	UNDERGROUND CABLE	
	DITCH	
	SWALE CENTERLINE	
	EASEMENTS	
	CHAIN LINK FENCE	

PAVING LEGEND

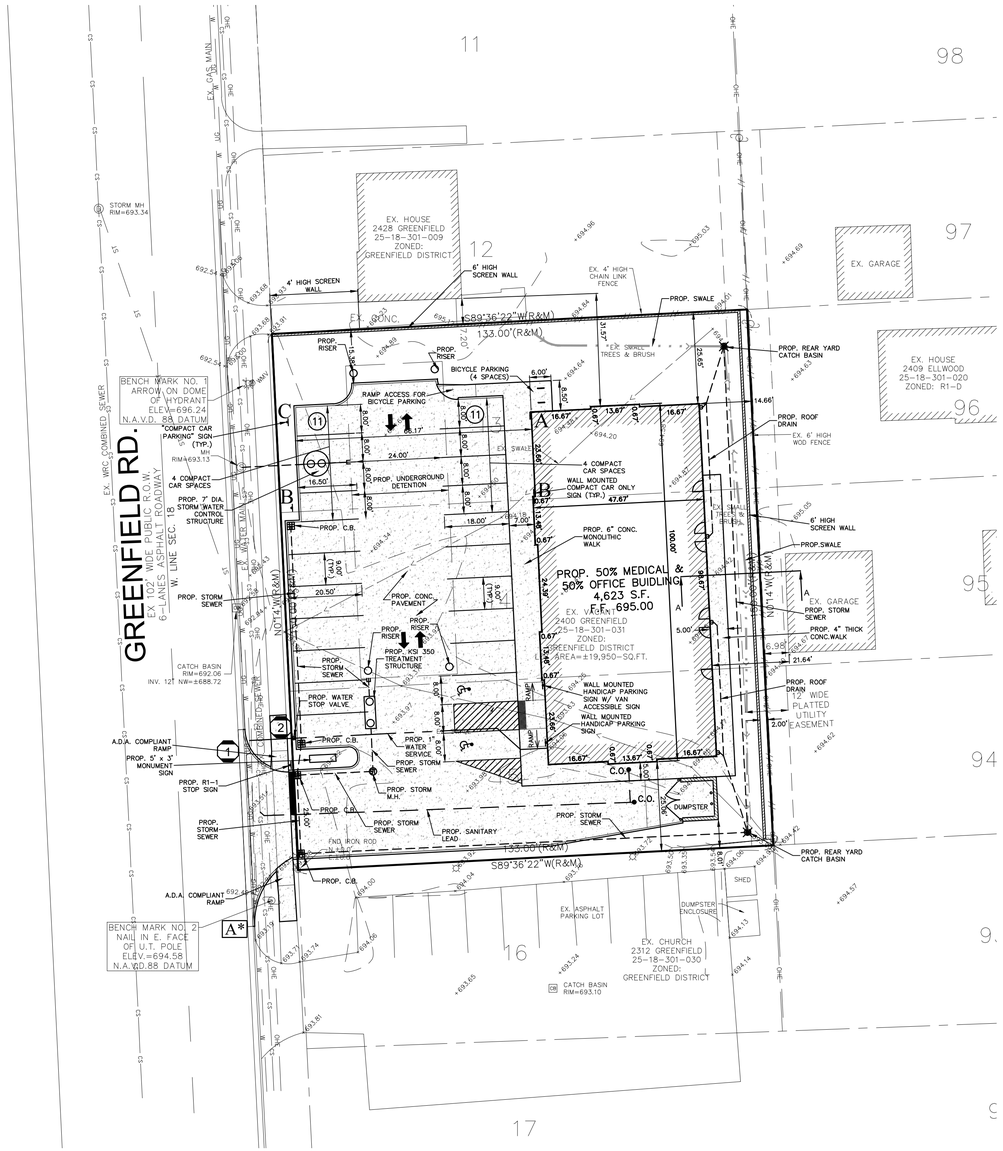
	PROPOSED CONCRETE PAVEMENT
	PROPOSED ASPHALT PAVEMENT
CURB	PROPOSED CURB & GUTTER
GUTTER	

GRADING LEGEND

T/C 888.88	TOP OF CURB GRADE
G 888.88	GUTTER GRADE
T/P 888.88	TOP OF PAVEMENT GRADE
T/W 888.88	TOP OF WALK GRADE
TOW 888.88	TOP OF WALL GRADE
B/W 888.88	BOTTOM OF WALL GRADE
F.G. 888.88	FINISHED GRADE



SCALE: HORIZONTAL 1" = 20'
VERICAL 1" = 4'



A*: A LETTER OF AGREEMENT FOR THE APPOACH ENCROACHEMENT TO BE OBTAINED FROM THE PROPERTY TO THE SOUTH



LOCATION MAP
N.T.S.

LEGAL DESCRIPTION:
PROPERTY LOCATED IN THE CITY OF BERKLEY, COUNTY OF OAKLAND, STATE OF MICHIGAN:

2400 GREENFIELD RD
Tax ID# 25-18-301-031
T1N, R11E, SEC 18 THOMAS PARK LOTS 13, 14, & 15.



A B C

COMPACT CAR ONLY PARKING SIGNS
N.T.S.

OE Engineering

Orman Engineering, LLC
5476 Vivian Lane
Waterford, MI 48327
phone: 248.682.6001
email: alex@ormanengineering.com

PROJECT
PROPOSED MEDICAL OFFICE BUILDING

CLIENT
2400 Trust
1359 Davis Ave.
Birmingham, MI 48009

Dan Winter
Cell: (313) 909-6800
Email:
primemangement@tir.com

SEAL

STATE OF MICHIGAN
ALEXANDER ORMAN
ENGINEER NO. 48878
LICENSED PROFESSIONAL ENGINEER

SHEET
DIMENSIONAL PLAN

PROJECT LOCATION
2400 Greenfield Rd.
City of Berkley,
Oakland County, MI 48072

811 Know what's **below** **Call** before you dig.

REVISIONS

Date	Description
01-21-2022	REVISED PER CITY
12-01-2021	REVISED PER CITY
09-24-2021	SITE PLAN APPROVAL

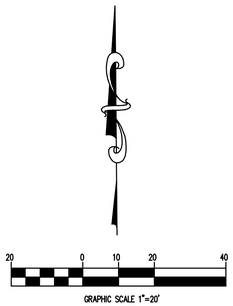
Designed by:	Drawn by:
A.O.	S.D.M.

Approved by:	Date:
A.O.	08-17-2021

Scale:
1" = 20'

Job No.: 1334

Sheet: SP-2



LEGEND

	AMERITECH		SIGNAL POLE
	WATER SHUT OFF		PUBLIC LIGHTING MH.
T	TELEPHONE RISER	E	ELECTRIC RISER OR METER
TH	TELEPHONE		CATHODIC PROTECTION
C.O.	SEWER CLEAN OUT		GUY WIRE
G	GAS METER		HIGH TENSION TOWER
	GAS VALVE /GAS MARKER		FLAG POLE
	MANHOLE (M.H.)		BOLLARD
	CATCH BASIN (C.B.)		STEEL COLUMN
	GATE VALVE IN WELL (G.V.W)		MAILBOX
	FIRE HYDRANT		SIGN
	STORM MANHOLE (ST. MH)	TRANS	ELECTRIC TRANSFORMER
	FENCE POST	EX.	EXISTING
	UTILITY POLE	PROP.	PROPOSED
	UTILITY POLE W/ LAMP EXTENSION		WATER FLOW INDICATOR

UTILITIES LEGEND

EXISTING		PROPOSED
	GAS	
SS	SANITARY (SAN)	SAND BACKFILL
ST	STORM (STM)	
CS	COMBINED (CS)	CS
WM	WATER MAIN (WM)	
OHW	OVERHEAD WIRE	
	UNDERGROUND CABLE	
	DITCH	
	SWALE CENTERLINE	
	EASEMENTS	
	CHAIN LINK FENCE	

PAVING LEGEND

	PROPOSED CONCRETE PAVEMENT
	PROPOSED ASPHALT PAVEMENT
CURB	PROPOSED CURB & GUTTER
GUTTER	

GRADING LEGEND

T/C 888.88	TOP OF CURB GRADE
G 888.88	GUTTER GRADE
T/P 888.88	TOP OF PAVEMENT GRADE
T/W 888.88	TOP OF WALK GRADE
TOW 888.88	TOP OF WALL GRADE
B/W 888.88	BOTTOM OF WALL GRADE
F.G. 888.88	FINISHED GRADE



LOCATION MAP
N.T.S.

R.C.O.C. NOTES

A SEPARATE PERRMIT IS REQUIRED FOR ALL UNDERGROUND UTILITIES WITHIN THE EXISTING R.O.W.

LANE CLOSURES RESTRCTED TO 9-3 MON. - FRI.

PROPER SIGNING IS REQUIRED BEFORE ANY WORK IN R.O.W. IS STARTED

FIXED OBJECTS TO BE MINIMUM 6 FEET OFF BACK OF CURB OR 12 FEET OFF EDGE OF PAVMENT

KEEP ROADS CLEAN OF DIRT AND DEBRIS

HAND DIG AROUND ALL UTILITIES

ADJUST / RECONSTRUCT EXISTING STRUCTURE AS WARRANTED

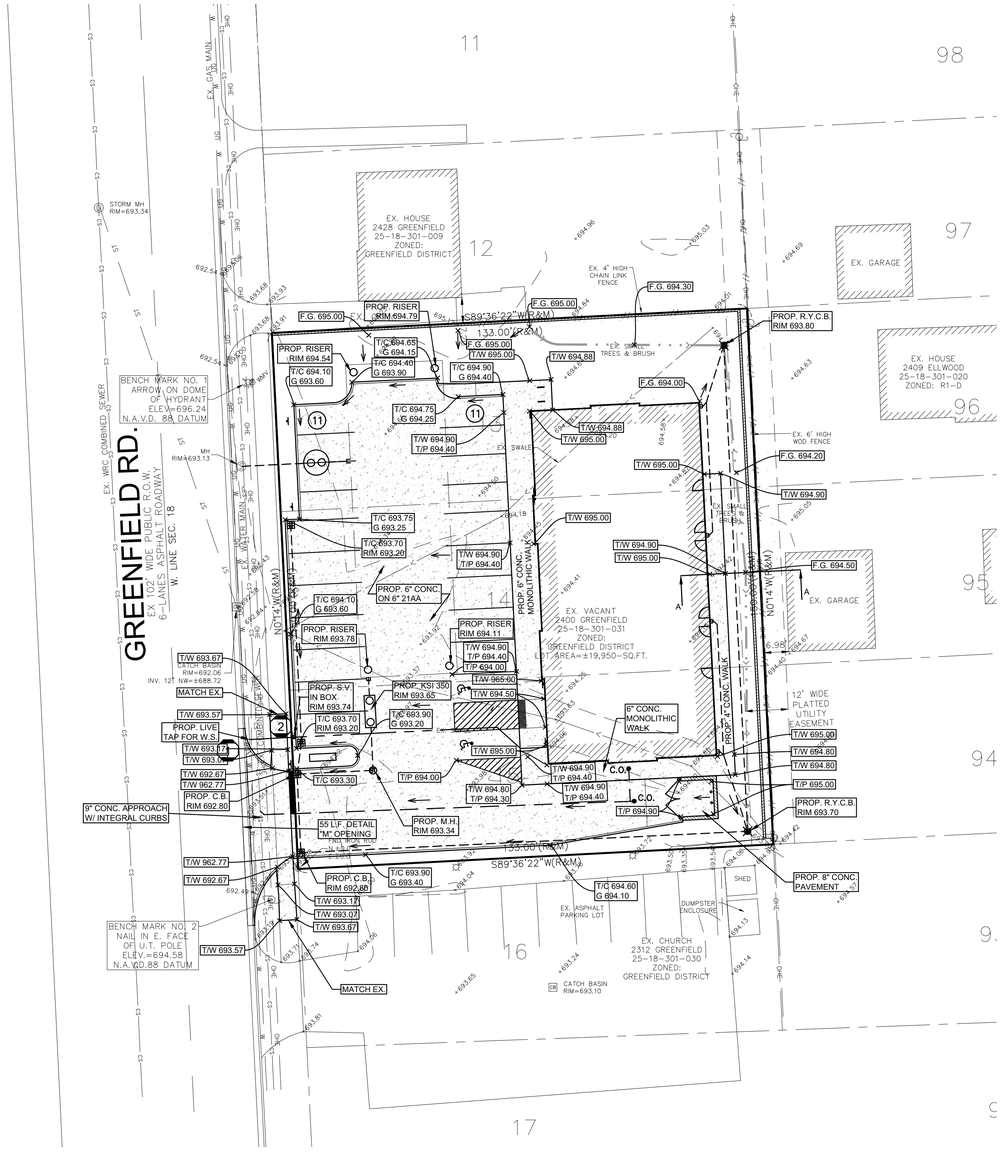
REMOVE OR RELOCATE FIXED OBJECTS PRIOR TO EXCAVATION

FULL DEPTH SAWCUT AND/OR MILL A BUTT JOINT WITH LOCATION/WIDTH AS DIRECTED BY RCOC INSPECTOR

MATCH AND TIE PROPOSED CURB TO EXITING CURB EPOXY COATED #4 BAR REQUIRED

ANY PEDESTRIAN FACILITIES SHALL BE CONSTRUCTED IN ACCORDANCE WITH CURRENT AMERICANS DISABILITIES ACT (A.D.A.) GUIDELINES

EXCAVATIONS WITHIN A 1:1 INFLUENCE OF THE R.O.W. WILL REQUIRED M.D.O.T. CLASS II BACKFILL COMPACTED TO 95% MAXIMUM DENSITY



Orman Engineering, LLC
5476 Vivian Lane
Waterford, MI 48327
phone: 248.682.6001
email: alex@ormanengineering.com

PROJECT

PROPOSED MEDICAL OFFICE BUILDING

CLIENT

2400 Trust
1359 Davis Ave.
Birmingham, MI 48009

Dan Winter
Cell: (313) 909-6800
Email:
primemangement@tir.com

SEAL

STATE OF MICHIGAN
ALEXANDER ORMAN
ENGINEER NO. 48878
LICENSED PROFESSIONAL ENGINEER

SHEET

PAVING & GRADING PLAN

PROJECT LOCATION

2400 Greenfield Rd.
City of Berkley,
Oakland County, MI 48072

811 Know what's below Call before you dig.

REVISIONS

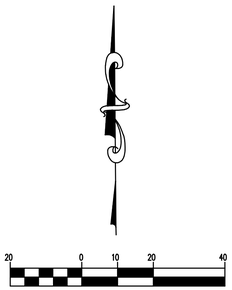
Date	Description
01-21-2022	REVISED PER CITY
12-01-2021	REVISED PER CITY
09-24-2021	SITE PLAN APPROVAL

Designed by:	Drawn by:
A.O.	S.D.M.

Approved by:	Date:
A.O.	08-17-2021

Scale: 1" = 20'

Job No.:	Sheet:
1334	SP-3



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GRAPHIC SCALE 1"=20'

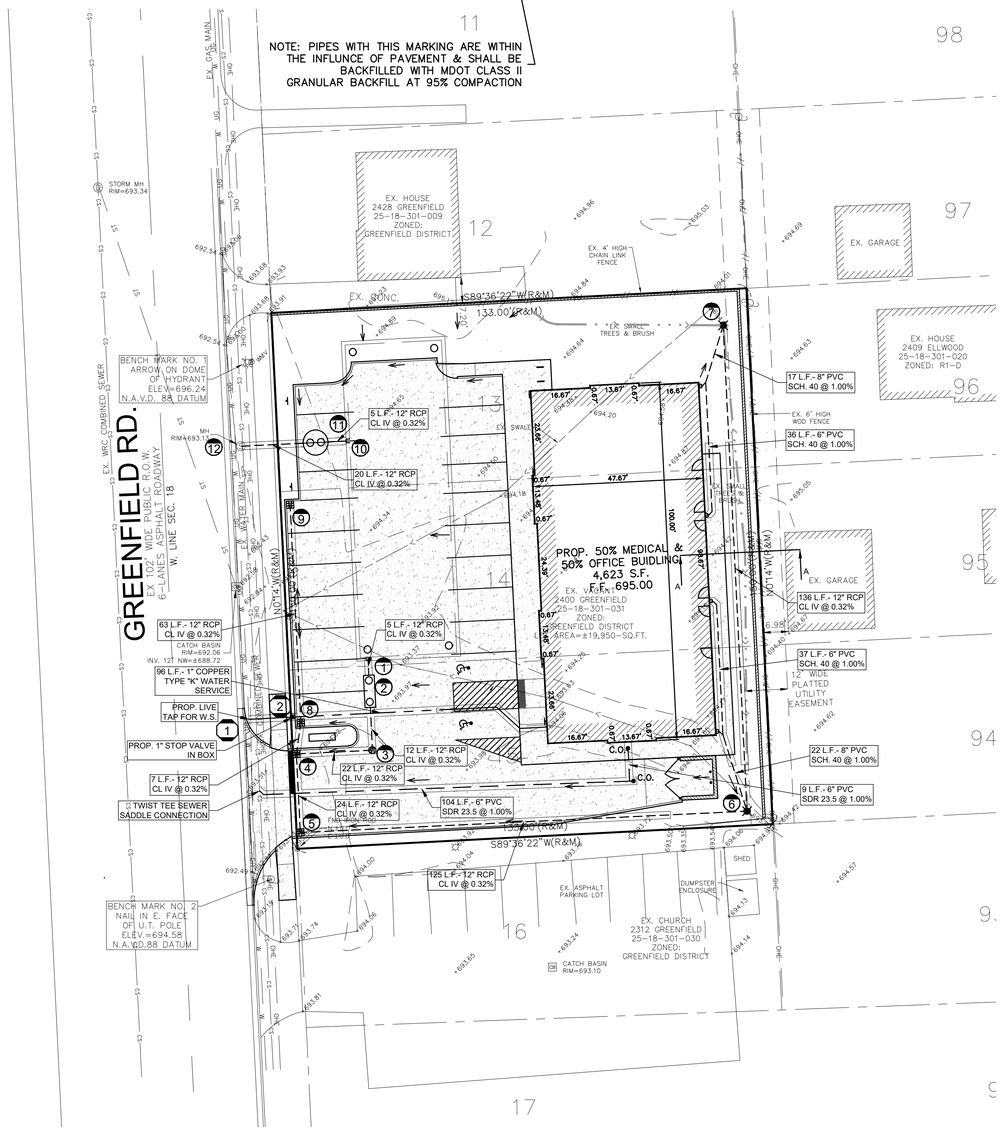
LEGEND

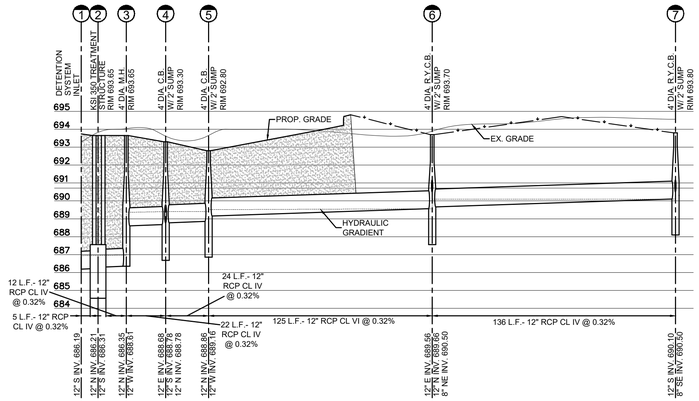
	AMERITECH		SIGNAL POLE
	WATER SHUT OFF		PUBLIC LIGHTING MH.
T	TELEPHONE RISER	E	ELECTRIC RISER OR METER
TH	TELEPHONE		CATHODIC PROTECTION
C.O.	SEWER CLEAN OUT		GUY WIRE
M	GAS METER		HIGH TENSION TOWER
	GAS VALVE /GAS MARKER		FLAG POLE
	MANHOLE (M.H.)		BOLLARD
	CATCH BASIN (C.B.)		STEEL COLUMN
	GATE VALVE IN WELL (G.V.W)		MAILBOX
	FIRE HYDRANT		SIGN
	STORM MANHOLE (ST. MH)	TRANS	ELECTRIC TRANSFORMER
	FENCE POST	EX.	EXISTING
	UTILITY POLE	PROP.	PROPOSED
	UTILITY POLE W/ LAMP EXTENSION		WATER FLOW INDICATOR

UTILITIES LEGEND

EXISTING		PROPOSED
G G	GAS	
SS SS	SANITARY (SAN)	SAND BACKFILL
ST ST	STORM (STM)	
CS CS	COMBINED (CS)	CS
W W	WATER MAIN (WM)	
OH OH	OVERHEAD WIRE	
UG UG	UNDERGROUND CABLE	
	DITCH	
	SWALE CENTERLINE	
	EASEMENTS	
	CHAIN LINK FENCE	

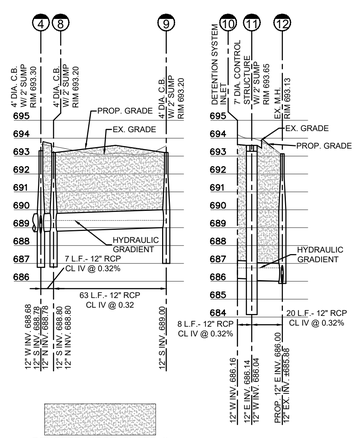
NOTE: PIPES WITH THIS MARKING ARE WITHIN THE INFLUNCE OF PAVEMENT & SHALL BE BACKFILLED WITH MDOT CLASS II GRANULAR BACKFILL AT 95% COMPACTION





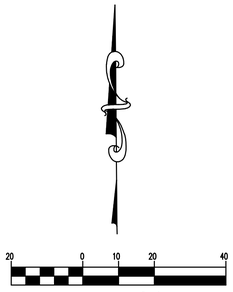
STORM SEWER PROFILES

SCALE: HORIZONTAL 1" = 40'
VERTICAL 1" = 4'



DENOTES MDOT CLASS II GRANULAR BACKFILL AT 95% COMPACTION


SITE
Catalpa Dr
Pierce Ave
Cambridge Rd
Oxford Rd
Meadowood Ave
Berkshire Rd
Wiltshire Blvd
Bonnymede Rd
Bonnymede Dr
San Queen Dr
Coral Gables Dr
Cinderell Pl
Bonnymede Ct
Bonnymede Pl
Berkshire Ct
Wiltshire Ct
Oxford Ct
Cambridge Ct
Meadowood Ct
Cinderell Ct
Coral Gables Ct
Berkshire Pl
Oxford Pl
Cambridge Pl
Meadowood Pl
Cinderell Pl
Coral Gables Pl
Bonnymede

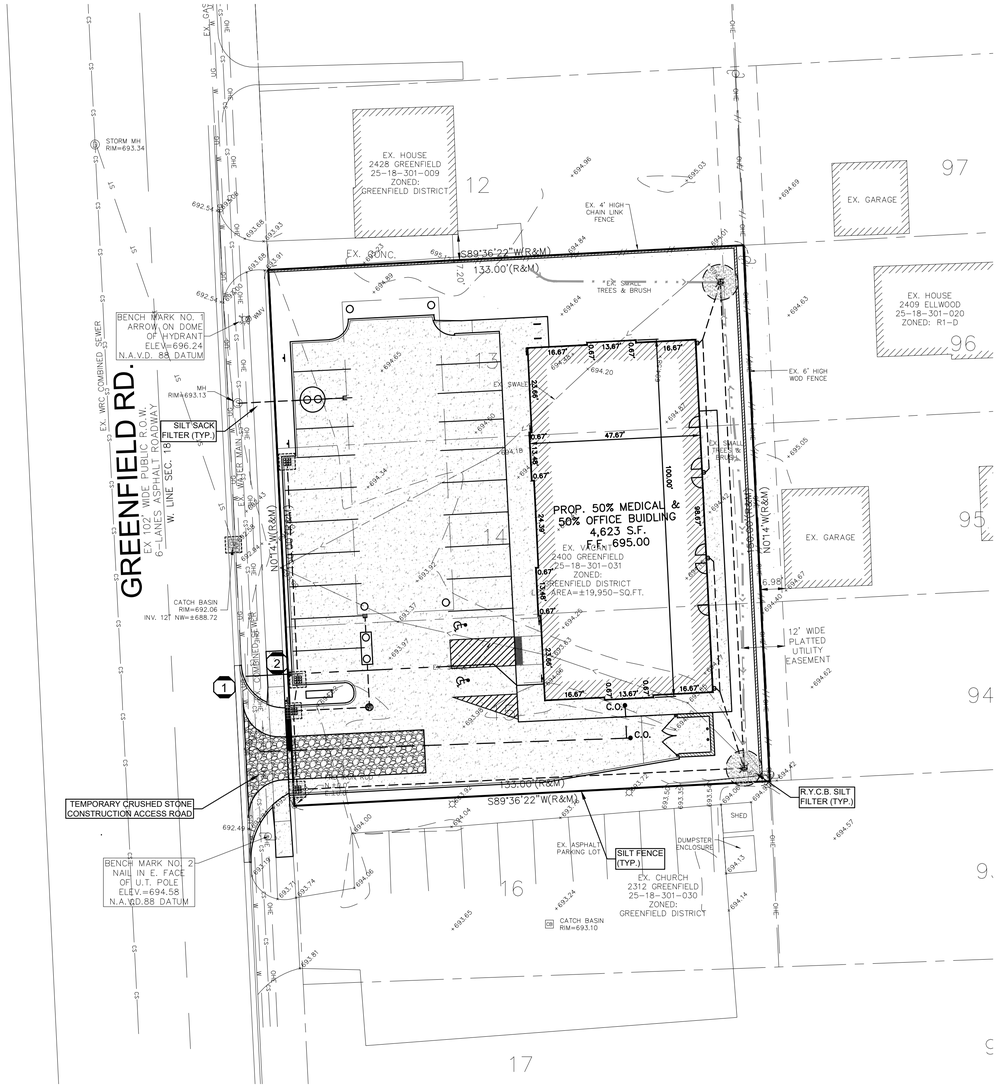


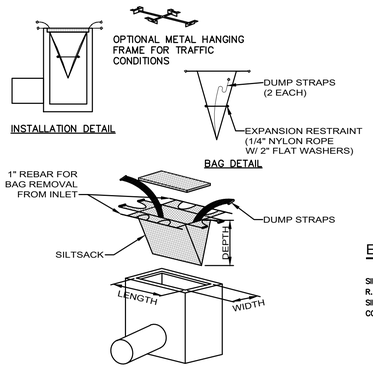


Map Unit Legend

Oakland County, Michigan (MI125)

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
41B	Aquents, sandy, loamy, undulating	15.3	14.2%
56A	Urban land-Blount-Lenawee complex, 0 to 3 percent slopes	84.5	78.0%
EtmaaE	Udorthents and Udipsamments, nearly level to hilly	8.4	7.8%
Totals for Area of Interest		**108.3**	**100.0%**





SILT SACK FILTER DETAIL

N.T.S.

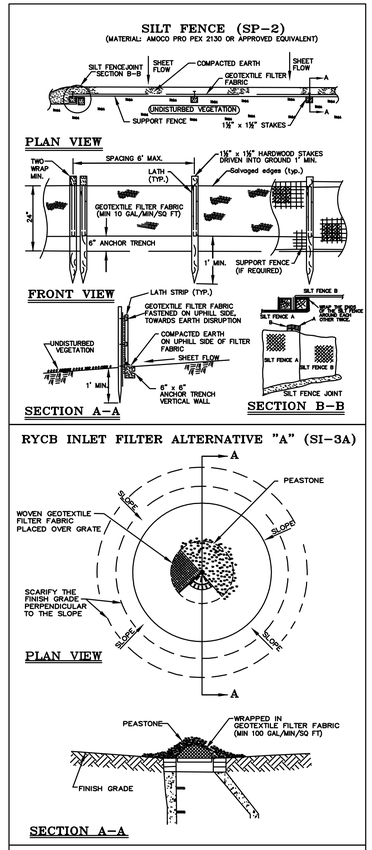
ESTIMATED SOIL EROSION QUANTITIES

	QUANTITY	UNITS
SILT FENCE	450	L.F.
R.Y.C.B. SILT FILTER	2	EA.
SILT SACK FILTER	5	EA.
CONSTRUCTION ACCESS ROAD 12" THICK	40	TONS



LOCATION MAP

N.T.S.



SOIL EROSION CONTROL NOTES

SOIL EROSION CONTROL MEASURES SHALL BE INSTALLED AND MAINTAINED ACCORDING TO OAKLAND COUNTY W.R.C. STANDARDS.

CUTTING, FILLING AND GRADING SHALL BE MINIMIZED AND THE NATURAL TOPOGRAPHY OF THE SITE SHALL BE PRESERVED TO THE MAXIMUM POSSIBLE EXTENT, EXCEPT WHERE SPECIFIC FINDINGS DEMONSTRATE THAT MAJOR ALTERATIONS WILL STILL MEET THE PURPOSES AND REQUIREMENTS OF THIS ORDINANCE.

DEVELOPMENT SHALL BE STAGED TO KEEP THE EXPOSED AREAS OF SOIL AS SMALL AS PRACTICABLE.

SOIL EROSION CONTROL MEASURES SHALL BE INSTALLED BETWEEN THE DISTURBED AREA AND ANY WATERCOURSES, INCLUDING RIVERS, STREAMS, CREEKS, LAKES, PONDS AND OTHER WATERCOURSES; WETLANDS; OR ROADWAYS ON OR NEAR THE SITE.

SEDIMENT RESULTING FROM ACCELERATED SOIL EROSION SHALL BE REMOVED FROM RUNOFF WATER BEFORE THAT WATER LEAVES THE SITE.

TEMPORARY AND PERMANENT SOIL EROSION CONTROL MEASURES DESIGNED AND CONSTRUCTED FOR THE CONVEYANCE OF WATER AROUND, THROUGH, OR AWAY FROM THE SITE SHALL BE DESIGNED TO LIMIT THE WATER FLOW TO A NON-EROSIVE VELOCITY.

TEMPORARY SOIL EROSION CONTROL MEASURES SHALL BE REMOVED AFTER PERMANENT SOIL EROSION CONTROL MEASURES HAVE BEEN IMPLEMENTED. ALL SITES SHALL BE STABILIZED WITH PERMANENT SOIL EROSION CONTROL MEASURES.

IF LAKES, PONDS, CREEKS, STREAMS, OR WETLANDS ARE LOCATED ON OR NEAR THE SITE, EROSION CONTROL MEASURES WHICH DIVERT RUNOFF AND TRAP SEDIMENT MUST BE PROVIDED AT STRATEGIC LOCATIONS. STRAW BALE BERMS MAY BE USED AS TEMPORARY STORM WATER DIVERSION STRUCTURES, BUT WILL NOT BE CONSIDERED SUFFICIENT FOR TRAPPING SEDIMENT. THE USE OF SEDIMENT BASINS, FILTER FABRIC, VEGETATED BUFFER STRIPS, AND ROCK FILTERS IN LIEU OF STRAW BALE BERMS SHALL BE STRONGLY ENCOURAGED. OTHER MEASURES MAY BE REQUIRED IF REASONABLY DETERMINED TO BE NECESSARY TO PROTECT A WATERCOURSE OR WETLAND.

WHEN IT IS NOT POSSIBLE TO PERMANENTLY STABILIZE A DISTURBED AREA AFTER AN EARTH CHANGE HAS BEEN COMPLETED OR WHEN SIGNIFICANT EARTH CHANGE ACTIVITY CEASES, TEMPORARY SOIL EROSION CONTROL MEASURES SHALL BE INSTALLED.

PERMANENT EROSION CONTROL MEASURES FOR ALL SLOPES, CHANNELS, DITCHES, OR ANY DISTURBED LAND AREA SHALL BE COMPLETED WITHIN 5 (FIVE) CALENDAR DAYS AFTER FINAL GRADING OR THE FINAL EARTH CHANGE HAS BEEN COMPLETED. ALL TEMPORARY SOIL EROSION CONTROL MEASURES SHALL BE MAINTAINED UNTIL PERMANENT SOIL EROSION CONTROL MEASURES ARE IMPLEMENTED.

VEGETATED BUFFER STRIPS SHALL BE CREATED OR RETAINED ALONG THE EDGES OF ALL LAKES, PONDS, CREEKS, STREAMS, OTHER WATERCOURSES, OR WETLANDS.

EROSION AND SEDIMENTATION CONTROL MEASURES SHALL RECEIVE WEEKLY MAINTENANCE AND AFTER EVERY STORM EVENT TO ASSURE PROPER FUNCTIONING BY THE CONTRACTOR.

ALL GRADING PLANS AND SPECIFICATIONS, INCLUDING EXTENSIONS OF PREVIOUSLY APPROVED PLANS, SHALL INCLUDE PROVISIONS FOR EROSION AND SEDIMENT CONTROL IN ACCORDANCE WITH, BUT NOT LIMITED TO, THE STANDARDS CONTAINED IN THE "STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL", PUBLISHED BY THE OAKLAND SOIL CONSERVATION DISTRICT.

VEGETATION SHALL BE ESTABLISHED WITHIN FIVE (5) DAYS OF FINAL GRADE, OR WHENEVER DISTURBED AREAS WILL REMAIN UNCHANGED FOR 30 DAYS OR GREATER. 3" TO 4" OF TOPSOIL WILL BE USED WHERE VEGETATION IS REQUIRED.

DIVERSION BERMS OR TERRACING SHALL BE IMPLEMENTED WHERE NECESSARY.

ALL DRAINAGE DITCHES SHALL BE STABILIZED WITH EROSION CONTROL BLANKETS AND SHALL UTILIZE CHECK DAMS AS NECESSARY. DRAINAGE DITCHES STEEPER THAT 3% SHALL BE SODDED.

SLOPES STEEPER THAN 1V:6H (16% SHALL BE STABILIZED WITH EROSION CONTROL BLANKETS.

SEQUENCE OF CONSTRUCTION

INSTALL CRUSHED CONCRETE ACCESS DRIVE AND TEMPORARY CULVERTS AT THE SITE ENTRANCE AS INDICATED ON THE PLANS.

INSTALL SILT FENCE OR SIMILAR APPROVED SILT BARRIER ALONG PROPERTY LINES AND AROUND SENSITIVE NATURAL FEATURES AS INDICATED ON THE PLANS.

EXCAVATE A SHALLOW SWALE/DITCH AROUND PERIMETER OF SITE. GRADE THE TEMPORARY SWALE TO AN EXISTING DRAINAGE FACILITY. PLACE OUTLET FILTER IN EXISTING UPSTREAM STORM SEWER FACILITIES.

IF INDICATED ON CONSTRUCTION PLANS, SEDIMENTATION BASINS, DETENTION POND, ETC., SHALL BE CONSTRUCTED PRIOR TO THE INSTALLATION OF ANY OTHER WORK.

STRIP EXISTING TOPSOIL, VEGETATION AND ORGANIC MATTER FROM BUILDING PAD AND PARKING AREAS. COMMENCE LAND BALANCE AND MASS GRADING OPERATIONS. MAINTAIN A MINIMUM BUFFER OF 15' OF EXISTING VEGETATION WHEREVER POSSIBLE AROUND SITE PERIMETER. STOCK PILES SHOULD BE LOCATED AWAY FROM EXISTING DRAINAGE FACILITIES.

EXCAVATE AND INSTALL UNDERGROUND UTILITIES. INSTALL INLET FILTERS AROUND ALL NEW STORM SEWER FACILITIES AS INDICATED ON THE PLANS. EXISTING AND PROPOSED STORM SEWER FACILITIES SHALL BE PROTECTED FROM EROSION AND SEDIMENT INFILTRATION AT ALL TIMES.

COMMENCE FINAL GRADING AND TRIMMING OPERATIONS. PREPARE SUBGRADE FOR INSTALLATION OF PROPOSED PAVEMENT.

SEED AND MULCH ALL DISTURBED SITE AREAS AND INSTALLED SITE LANDSCAPING.

REMOVE CONSTRUCTION DEBRIS AND JET VAC NEWLY INSTALLED STORM SEWER SYSTEM AS REQUIRED BY THE MUNICIPALITY.

REMOVE ALL REMAINING TEMPORARY SOIL EROSION AND SEDIMENTATION CONTROL MEASURES ONCE PERMANENT MEASURES ARE ESTABLISHED.

WHENEVER POSSIBLE, THE SITE SHALL BE GRADED TO WITHIN SIX INCHES (6") OF THE PROPOSED FINISH GRADE PRIOR TO INSTALLATION OF UNDERGROUND FACILITIES.

STAGING OF PROPOSED WORK SHALL BE COMPLETED BY THE CONTRACTOR AS REQUIRED TO ENSURE PROGRESSIVE STABILIZATION OF DISTURBED AREAS.

REMOVE ALL TEMPORARY SESC MEASURES ONCE SITE IS STABILIZED.

SEQUENCE OF CONSTRUCTION

		OPERATION TIME SCHEDULE – BEGINNING 2022											
		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
A	Soil Erosion Control Measures												
B	Excavate Foundations												
C	Backfill Foundations												
D	Stone Access Drive												
E	Complete All Earth Movement												
F	Seed & Mulch As Required												

SOIL EROSION LEGEND

- SILT FENCE
- LIMIT OF EARTH DISRUPTION
- CURB & GUTTER INLET FILTER
- LOW POINT FILTER
- TEMPORARY ACCESS ROAD

LEGEND

	AMERITECH		SIGNAL POLE
	WATER SHUT OFF		PUBLIC LIGHTING MH.
T	TELEPHONE RISER	E	ELECTRIC RISER OR METER
TH	TELEPHONE		CATHODIC PROTECTION
C.O.	SEWER CLEAN OUT		GUY WIRE
G	GAS METER		HIGH TENSION TOWER
GV	GAS VALVE /GAS MARKER		FLAG POLE
	MANHOLE (M.H.)		BOLLARD
	CATCH BASIN (C.B.)		STEEL COLUMN
GW	GATE VALVE IN WELL (G.V.W)		MAILBOX
	FIRE HYDRANT		SIGN
	STORM MANHOLE (ST. MH.)	TRANS	ELECTRIC TRANSFORMER
	FENCE POST	EX.	EXISTING
	UTILITY POLE	PROP.	PROPOSED
	UTILITY POLE W/ LAMP EXTENSION		WATER FLOW INDICATOR

Orman Engineering, LLC
5476 Vivian Lane
Waterford, MI 48327
phone: 248.682.6001
email: alex@ormanengineering.com

PROJECT

PROPOSED MEDICAL OFFICE BUILDING

CLIENT

2400 Trust
1359 Davis Ave.
Birmingham, MI 48009

Dan Winter
Cell: (313) 909-6800
Email:
primemangement@tir.com

SEAL

STATE OF MICHIGAN
ALEXANDER ORMAN
ENGINEER NO. 48878
LICENSED PROFESSIONAL ENGINEER

SHEET

SOIL EROSION & SEDIMENTATION CONTROL PLAN

PROJECT LOCATION

2400 Greenfield Rd.
City of Berkley,
Oakland County, MI 48072

Know what's below Call before you dig.

REVISIONS

Date	Description
01-21-2022	REVISED PER CITY
12-01-2021	REVISED PER CITY
09-24-2021	SITE PLAN APPROVAL

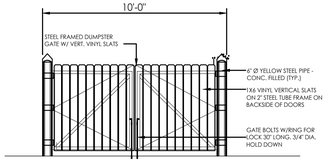
Designed by:	Drawn by:
A.O.	S.D.M.

Approved by:	Date:
A.O.	08-17-2021

Scale: 1" = 20'

Job No.:	Sheet:
1334	SP-5





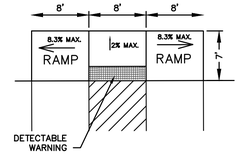
GENERAL NOTES:

1. ALL EXTERIOR MATERIALS TO MATCH BUILDING IF THERE IS NO BRICK TO MATCH - MATCH MASONRY

2. ADHERE TO ALL LOCAL ORDINANCES AND DESIGN REQUIREMENTS. NOTIFY ARCHITECT OF ANY DISCREPANCIES.

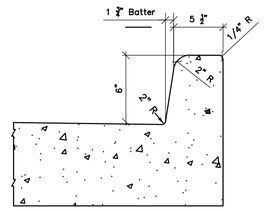
DETECTABLE WARNINGS SHALL CONSIST OF RAISED TRUNCATED DOMES WITH A DIAMETER OF NOMINAL 0.9 IN. (23 MM) A HEIGHT OF NOMINAL 0.2 IN. (5 MM) AND A CENTER TO CENTER SPACING OF NOMINAL 2.35 IN. (60 MM) AND SHALL CONTRAST VISUALLY WITH ADJOINING SURFACES, EITHER LIGHT-ON-DARK OR DARK-ON-LIGHT.

THE MATERIAL USED TO PROVIDE CONTRAST SHALL BE AN INTEGRAL PART OF THE WALKING SURFACE.



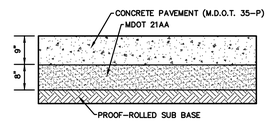
BARRIER FREE RAMP DETAIL

N.T.S.



6" INTEGRAL CURB DETAIL

N.T.S.



9" CONCRETE SECTION FOR APPROACH

N.T.S.

Orman Engineering, LLC
5476 Vivian Lane
Waterford, MI 48327
phone: 248.682.6001
email: alex@ormanengineering.com

PROJECT

PROPOSED MEDICAL OFFICE BUILDING

CLIENT

2400 Trust
1359 Davis Ave.
Birmingham, MI 48009

Dan Winter
Cell: (313) 909-6800
Email:
primemangement@tir.com

SEAL



SHEET

SITE DETAILS & DETENTION CALCULATIONS

PROJECT LOCATION

2400 Greenfield Rd.
City of Berkley,
Oakland County, MI 48072

811 Know what's below Call before you dig.

REVISIONS

01-21-2022	REVISED PER CITY
12-01-2021	REVISED PER CITY
09-24-2021	SITE PLAN APPROVAL

Date	Description

Designed by:	Drawn by:
A.O.	S.D.M.

Approved by:	Date:
A.O.	08-17-2021

Scale: N/A

Job No.:	Sheet:
1334	SP-6

Detention Pond Calculations Oakland County Method
100 Year Event

Runoff Volume Determination

Land Use	Runoff Coefficient	Drainage Area	
Pavement and Building	0.95	0.35	Acres
Detention Pond	1.00	0.00	Acres
Landscape/ Open Space	0.25	0.11	Acres
Total:		0.46	Acres
Weighted Runoff Coefficient "C" Factor =		0.78	

Determine Runoff Calculation:

Contributing Acreage, A =	0.46	Acres
Runoff Coefficient, C =	0.78	Imperviousness
Intensity, I =	6.11	In/Hour
Proposed Discharge, Qpr =	2.20	CFS

Determine Required Volume:

Allowable Outflow:	0.20	CFS/AC
Qa:	0.092	CFS
Qo(max):	0.256	CFS/AC.IMP.
Ts:	175.88	MIN
Vs:	12648.65	CF/AC.IMP.
Vt100:	4553.51	CF

Determine Provided Volume @ Elevation 690.16

48" HDPE Pipe (feet)	Area (sf)	Volume (cf)
364	12.56	4572 CF

Determine Storm Water Runoff Treatment Sructure:

Actual Discharge from Stom Sewer, Qact =	1.54 CFS
Use KSI 350	

Control Structure Outlet Pipe and Flood Control Flow Restrictor Sizing

Zout:	686.04 FEET
Z100:	690.16 FEET

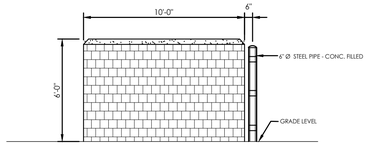
FORMULA:
hmax =Z100 - Zout Aout =Qmax/0.62x(2ghmax)^0.5
Dout =[((Aout)x 4 / 3.14))^0.5]/12

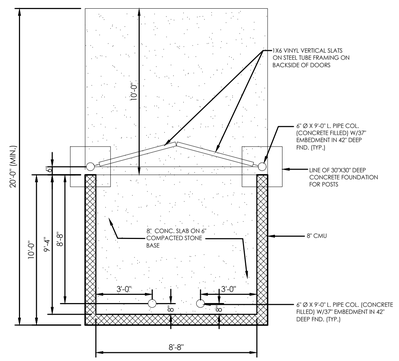
Qmax:	0.256 CFS
Assume the outlet is 12"DIA RCP pipe:	1.00 FEET
Zout:	687.04 FEET
hmax:	3.12 FEET
Aout:	0.029 SF
Dout:	2.31 INCHES
Ao (2"):	0.022 SF
The actual maximum release rate through the flow restrictor and outlet pipe is:	
Qmax:	0.222 CFS
Qmax = 0.222 CFS < 0.256 CFS	

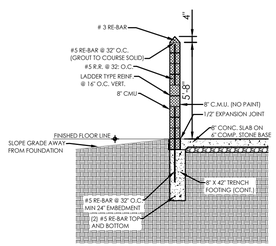
Outlet Pipe Size and Slope

FORMULA:
n =0.013 for RCP Pipe V =Qpeak/Aout
R =Dout/4 S =[[Qmax x n)/(1.486 x Aout x R^2/3)]

Qpeak:	1.54 CFS
Assume the outlet is 12"DIA RCP pipe	
R:	0.25 FEET
S:	0.0028 FT/FT
Use 12" RCP Pipe at min. slope of 0.32%	

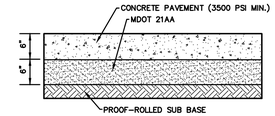






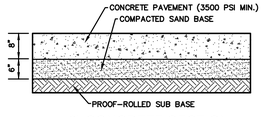
Dumpster Enclosure Plan

N.T.S.



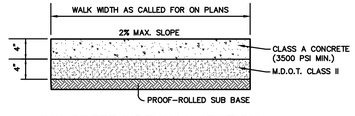
6" CONCRETE SECTION FOR PARKING LOT

N.T.S.



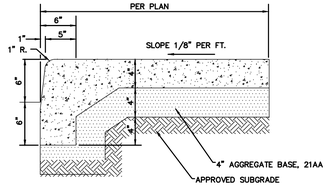
8" CONCRETE SECTION FOR DUMPSTER ENCLOSURE

N.T.S.



CONCRETE SIDEWALK SECTION

N.T.S.



6" MONOLITHIC CURB AND WALK

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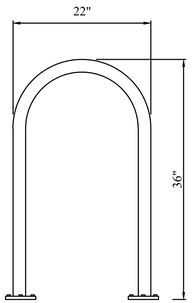
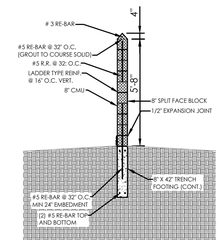


TYPICAL "INVERTED U" BICYCLE RACK

N.T.S.

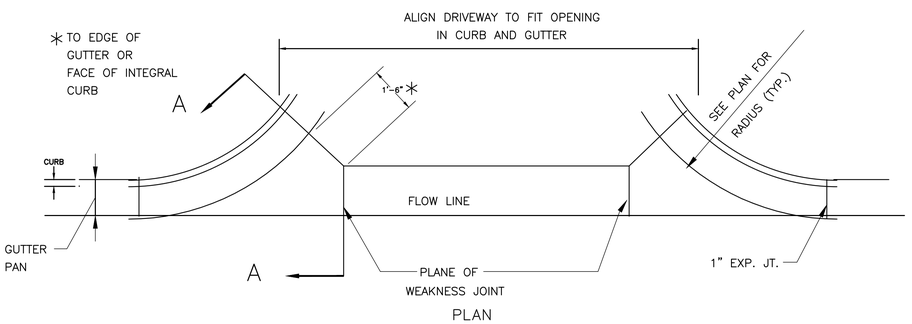


SCREEN WALL DETAIL

N.T.S.

EXAMPLE OF SPLIT FACE BLOCK

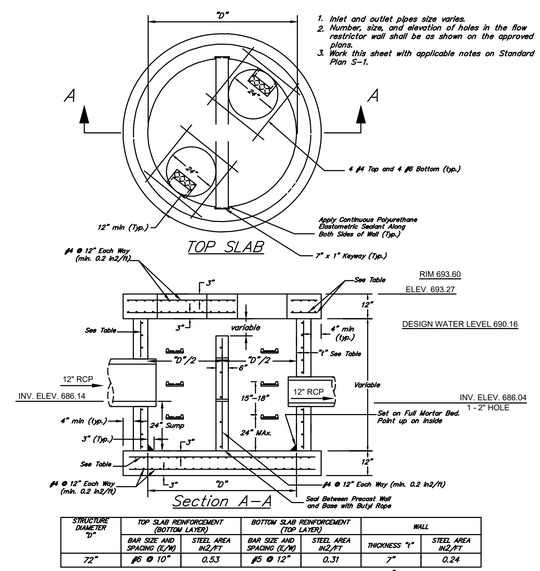
SECTION A-A



PLAN

DETAIL "M" CONCRETE DRIVEWAY OPENING

N.T.S.



STRUCTURE DIAMETER "D"	TOP SLAB REINFORCEMENT (BOTTOM LAYER)		BOTTOM SLAB REINFORCEMENT (TOP LAYER)		WALL	
	BAR SIZE AND SPACING (E/W)	STEEL AREA IN2/FT	BAR SIZE AND SPACING (E/W)	STEEL AREA IN2/FT	THICKNESS "t"	STEEL AREA IN2/FT
72"	#5 @ 10"	0.53	#5 @ 12"	0.31	7"	0.24

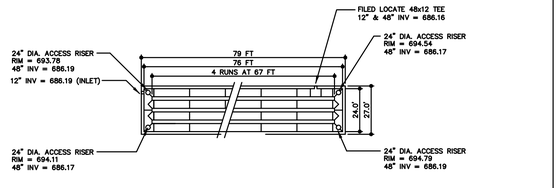
FLOW RESTRICTOR WITH OVER FLOW SCALE NOT TO SCALE

PRECAST FLOW RESTRICTOR STRUCTURE

SYSTEM CAPACITY
48" DIA. = 12.56 CF/FT
(4 RUNS X 67 FT) + (2 RUNS X 24) = 316 LF
316 FT X 12.56 CF/FT = 3,968 CF OF STORAGE PROVIDED

INSTALL SYSTEM PER ASTM D2321. BACKFILL WITH MDOT 21AA AGGREGATE COMPACT TO 95% MODIFIED PROCTOR IN 8" LIFTS

SEE INSTALLATION NOTE ON PAGE 2

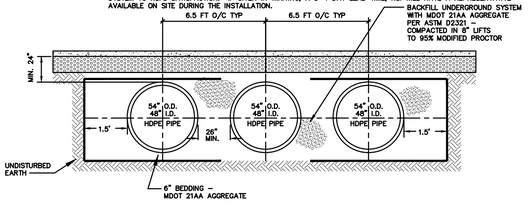


48" HDPE SOLID UNDERGROUND DETENTION SYSTEM
NO SCALE

NOTE:
HDPE PIPE MANUFACTURERED
PER ASSHTO M294, TYPE S, LATEST EDITION
UNDERGROUND DETENTION SYSTEM DISTRIBUTED BY
KENNEDY SOLUTIONS INC. 800-699-4046

DESIGN BY: AG / RK	REV:	DATE: 11-2-21	1 OF 4	KSI	KENNEDY SOLUTIONS, INC. 2111 Sage Lake Road Prescott, MI 48756 Ph: 800-699-4046
MANUF. APPROVAL BY: -	SCALE: NTS	SHEET NO.			
DRAWING NO. 48 UGDS v1					

INSTALLATION NOTE:
HDPE UNDERGROUND DETENTION SYSTEM SHALL BE INSTALLED IN ACCORDANCE WITH ASTM D2321. CARE SHOULD BE EXERCISED WITH CONSTRUCTION EQUIPMENT DURING INSTALLATION TO PROTECT THE SYSTEM FROM DAMAGE DUE TO POINT AND IMPACT LOADING. USE A LARGE EXCAVATOR TO PLACE STONE BETWEEN AND ABOVE THE PIPE IS PREFERRABLE. COMPACTION OF THE 21AA STONE IN 8 INCH LIFTS TO 6 INCHES ABOVE PIPE. USE A VIBRATORY COMPACTOR, NOT A HOE PACK.
PLACE THE REMAINING
21AA STONE USING A TRACKED PIECE OF EQUIPMENT (DOZER) OR CONTINUE USING THE LARGE EQUIP. DESCRIBED ABOVE. DO NOT USE RUBBER TIRED EQUIP.
ONCE THE SYSTEM IS INSTALLED, PLACE A ORANGE SAFETY FENCE 4–5 FT HIGH W/ TEE POST, AROUND THE SYSTEM. PLACE FENCE 5 FT BEYOND GRID FOOTPRINT. ANY DAMAGE TO THE SYSTEM AS A RESULT OF NOT FOLLOWING THESE INSTRUCTIONS AND THE BLUEPRINT DETAILS, SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO REPAIR THE SYSTEM TO KSI'S SATISFACTION. IF GIVEN IN WRITING, A 3–4 DAY LEAD TIME, KSI WILL HAVE A REPRESENTATIVE AVAILABLE ON SITE DURING THE INSTALLATION.



NOTES:
1. HDPE PIPE & FITTINGS SHALL CONFORM TO AASHTO M–294, TYPE S, LATEST EDITION
2. INSTALL UNDERGROUND DETENTION SYSTEM IN ACCORDANCE WITH ASTM D 2321, "STANDARD PRACTICE FOR UNDERGROUND INSTALLATION OF THERMOPLASTIC PIPE OR SEWER AND OTHER GRAVITY FLOW APPLICATIONS"
3. MEASURES SHALL BE TAKEN TO PREVENT MIGRATION OF NATIVE FINES INTO BACKFILL MATERIAL.

TYPICAL CROSS SECTION FOR 48" HDPE SOLID UNDERGROUND DETENTION SYSTEM
NO SCALE

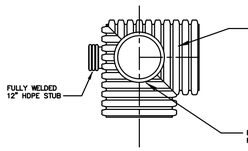
NOTE:
HDPE PIPE MANUFACTURERED
PER ASSHTO M294, TYPE S, LATEST EDITION
UNDERGROUND DETENTION SYSTEM DISTRIBUTED BY
KENNEDY SOLUTIONS INC. 800-699-4046

***DESIGN ENGINEER TO DETERMINE IF SITE CONDITIONS REQUIRE THE USE OF NON WOVEN FABRIC OR GEOGRID

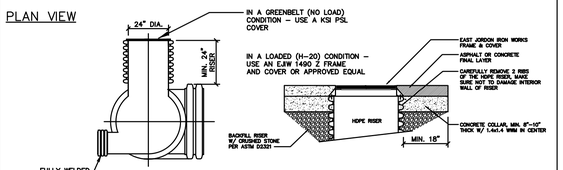
DESIGN BY: AG / RK	REV:	DATE: 11-2-21	2 OF 4	KSI	KENNEDY SOLUTIONS, INC. 2111 Sage Lake Road Prescott, MI 48756 Ph: 800-699-4046
MANUF. APPROVAL BY: -	SCALE: NTS	SHEET NO.			
DRAWING NO. 48 UGDS CROSS SECTION v1					

TYPICAL ACCESS RISER SECTION

24" DIA. ACCESS MANHOLE IN HDPE ELBOW



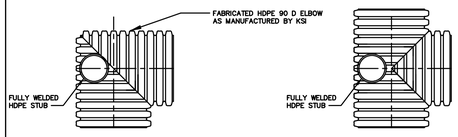
PLAN VIEW



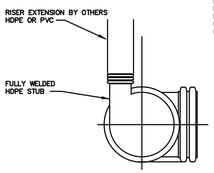
CROSS SECTION

DESIGN BY: AG / RK	REV: 11-2-21	DATE: 3-7-22	3 OF 4	KSI	KENNEDY SOLUTIONS, INC. 2111 Sage Lake Road Prescott, MI 48756 Ph: 800-699-4046
MANUF. APPROVAL BY: -	SCALE: NTS	SHEET NO.			
DRAWING NO. ACCESS RISER					

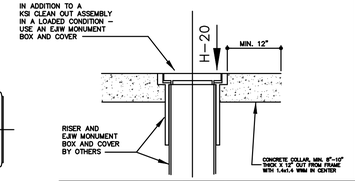
TYPICAL CLEAN OUT DETAIL



PLAN VIEW OF 90 ELBOW



PLAN VIEW OF TEE

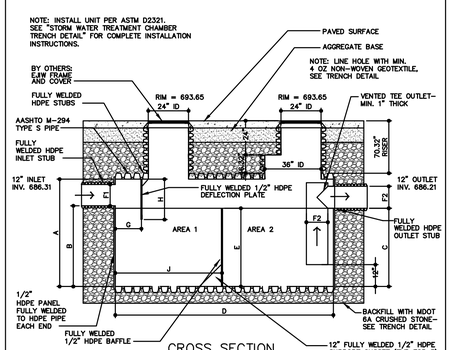


CROSS SECTION

DESIGN BY: AG / RK	REV:	DATE: 11-2-21	4 OF 4	KSI	KENNEDY SOLUTIONS, INC. 2111 Sage Lake Road Prescott, MI 48756 Ph: 800-699-4046
MANUF. APPROVAL BY: -	SCALE: NTS	SHEET NO.			
DRAWING NO. CLEAN OUT DETAIL					

STORM WATER TREATMENT CHAMBER
KSI SERIES 350X HDPE CHAMBER

NOTE: INSTALL UNIT PER ASTM D2321. SEE "STORM WATER TREATMENT CHAMBER TRENCH DETAIL" FOR COMPLETE INSTALLATION INSTRUCTIONS.



CROSS SECTION

STORM WATER TREATMENT CHAMBER DIMENSIONS AND CAPACITIES

MODEL NO.	A	B	C	D	E	F1	F2	G	H	J	AREA 1	AREA 2
350X–46–12	48"	32"	32"	96"	32"	12"	12"	12"	21"	48"	24 CF	31 CF

DESIGN BY: AG / RK	REV:	DATE: 11-2-21	1 OF 1	KSI	KENNEDY SOLUTIONS, INC. 2111 Sage Lake Road Prescott, MI 48756 Ph: 800-699-4046
MANUF. APPROVAL BY: -	SCALE: NTS	SHEET NO.			
DRAWING NO. SERIES 350X SWTC v6.1.21					

STORM WATER TREATMENT CHAMBER
INSTALLATION AND MAINTENANCE GUIDELINES

INSTALLATION GUIDELINES

1. EXCAVATE AREA FOR KSI SWTC AND PREPARE TRENCH BOTTOM PER ASTM D2321, SECTIONS 6 & 7.

2. THE KSI SWTC SHALL BE INSTALLED ON A BED OF NO LESS THAN 12" MDOT 6A CRUSHED STONE MATERIALS COMPACTED TO 95% PROCTOR DENSITY. COMPACTED TO 95% (90% MIN. FOR MDOT 6A CRUSHED STONE MATERIAL) OF THE BACKFILL MATERIAL'S MAXIMUM WEIGHT AT A MOISTURE CONTENT NOT GREATER THAN THE OPTIMUM.

3. INSTALL KSI SWTC UNIT, HIGH FLOW BYPASS LINE (IF APPLICABLE), DIVERSION STRUCTURE AND EXITING STRUCTURE AT ELEVATIONS INDICATED ON SITE PLAN. COUPLE INLET AND OUTLET HDPE SPLIT COUPLERS TO CONVANCE PIPE.

4. BACKFILL UNIT WITH MDOT 6A CRUSHED STONE MATERIALS PER ASTM D2321. BACKFILL SHALL BE COMPACTED TO 95% PROCTOR DENSITY.

5. THE HDPE ACCESS RISERS SHALL BE FIELD CUT TO FINISH GRADE BY THE CONTRACTOR. SEE RISER INSTALLATION OPTIONS PAGE.

6. KSI RECOMMENDS FILLING THE UNIT WITH WATER UPON COMPLETION OF INSTALLATION UP TO THE BAFFLE HEIGHT.

7. ONCE THE UNIT IS INSTALLED, PLACE A ORANGE SAFETY FENCE 4–5 FT HIGH W/ TEE POST, AROUND THE SYSTEM. PLACE FENCE 5 FT BEYOND GRID FOOTPRINT. ANY DAMAGE TO THE SYSTEM AS A RESULT OF NOT FOLLOWING THESE INSTRUCTIONS AND THE BLUEPRINT DETAILS, SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO REPAIR THE SYSTEM TO KSI'S SATISFACTION. IF GIVEN IN WRITING, A 3–4 DAY LEAD TIME, KSI WILL HAVE A REPRESENTATIVE AVAILABLE ON SITE DURING THE INSTALLATION.

MAINTENANCE GUIDELINES

1. ALL STORM WATER TREATMENT CHAMBERS WILL REQUIRE PERIODIC MAINTENANCE DEPENDING ON SPECIFIC SITE CONDITIONS.

2. KSI RECOMMENDS CLEANING THE SWTC QUARTERLY AND AFTER HEAVY RAIN STORMS. SEDIMENT IS EASIER TO REMOVE WHEN IT IS REMOVED ON A REGULAR BASES.

3. DISPOSAL OF MATERIAL FROM THE KSI SWTC ARE SIMILAR TO THAT OF ANY OTHER BEST MANAGEMENT PRACTICES (BMP). LOCAL GUIDELINES SHOULD BE CONSULTED PRIOR TO DISPOSAL OF THE SWTC CONTENTS. PETROLEUM WASTE PRODUCTS SHOULD BE REMOVED BY A LICENSED WASTE MANAGEMENT COMPANY.

4. IF A HYDROCARBON REMOVAL SYSTEM WAS INSTALLED – REPLACE IT WHEN IT TURNS BLACK. UNIT CAN BE DISPOSED OF VIA NORMAL REFUSE REMOVAL. SPENT UNIT DOES NOT LEACH CAPTURED CONTAMINATES.

WHITE = NEW
GRAY = WORKING
BLACK = SPENT – NEEDS REPLACEMENT – CONTACT KSI FOR REPLACEMENT PARTS

5. AFTER CLEANING THE UNIT – KSI RECOMMENDS REFILLING THE UNIT WITH WATER

DESIGN BY: AG / RK	REV: 8-1-21	DATE: 6-17-08	1 OF 1	KSI	KENNEDY SOLUTIONS, INC. 2111 Sage Lake Road Prescott, MI 48756 Ph: 800-699-4046
MANUF. APPROVAL BY: -	SCALE: NTS	SHEET NO.			
DRAWING NO. SWTC INSTALL & MAINT.					

STORM WATER TREATMENT CHAMBER TRENCH DETAIL

NOTES:
1. FOUNDATION: WHERE THE TRENCH BOTTOM IS UNSTABLE, THE CONTRACTOR SHALL EXCAVATE TO A DEPTH REQUIRED BY THE ENGINEER AND REPLACE WITH A FOUNDATION OF MDOT 6A CRUSHED STONE AS DEFINED IN ASTM D2321, LATEST EDITION; AS AN ALTERNATIVE TRENCH BOTTOM MAY BE STABILIZED USING A WOVEN GEOTEXTILE FABRIC AND OR A GEOGRID.
2. BEDDING: SUITABLE MATERIAL SHALL BE MDOT 6A CRUSHED STONE INSTALLED AS REQUIRED IN ASTM D2321, LATEST EDITION. UNLESS OTHERWISE SPECIFIED BY THE ENGINEER, MINIMUM BEDDING THICKNESS SHALL BE 12" FOR 36"–120" DIA. SWTC.
3. HAUNCHING AND INITIAL BACKFILL: SUITABLE MATERIAL SHALL BE MDOT 6A CRUSHED STONE AND INSTALLED AS REQUIRED IN ASTM D2321, LATEST EDITION, MAXIMUM TEN INCH (10") LIFTS.
4. UNLESS OTHERWISE SPECIFIED BY THE ENGINEER, MIN. TRENCH WIDTHS ARE AS FOLLOWS

NOMINAL I.D.	NOMINAL O.D.	MINIMUM RECOMM. TRENCH WIDTH
36"	42"	90"
48"	54"	102"
60"	66"	114"
72"	80.5"	129"
96"	105.9"	154"
120"	131.3"	190"

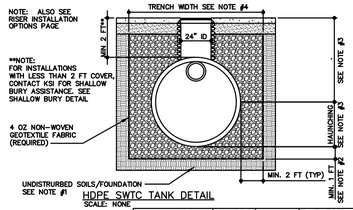
5. MINIMUM COVER: MINIMUM RECOMMENDED COVER FOR VARIOUS LIVE LOADING CONDITIONS ARE AS SUMMARIZED IN THE FOLLOWING TABLE. UNLESS OTHERWISE NOTED, ALL DIMENSIONS ARE TAKEN FROM THE TOP OF THE SWTC TANK TO THE GROUND SURFACE.

SURFACE LIVE LOAD	MINIMUM REQUIRED COVER FOR WAYNE COUNTY (ALL SIZES)
HS–25/H25 (FLEXIBLE PAVEMENT)	MIN. 24" AS MEASURED FROM THE BOTTOM OF THE FLEXIBLE PAVEMENT
HS–25/H25 (RIGID PAVEMENT)	MIN. 24" AS MEASURED FROM THE TOP OF THE RIGID PAVEMENT
E80 RAILWAY	24"
HEAVY CONSTRUCTION	48"

NOTE: ALSO SEE RISER INSTALLATION OPTIONS PAGE

**NOTE: FOR INSTALLATIONS WITH LESS THAN 2 FT COVER, CONTACT KSI FOR SHALLOW BURY ASSISTANCE. SEE SHALLOW BURY DETAIL

4 OZ NON–WOVEN GEOTEXTILE FABRIC (REQUIRED)

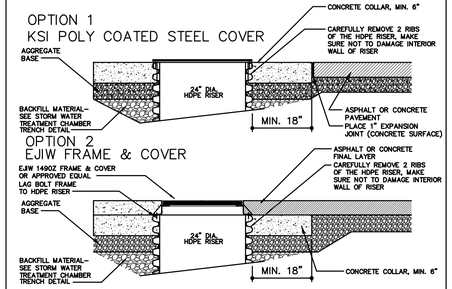


HDPE SWTC TANK DETAIL
SCALE: NONE

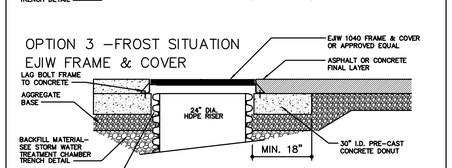
DESIGN BY: AG / RK	REV: 8-1-21	DATE: 6-13-08	1 OF 1	KSI	KENNEDY SOLUTIONS, INC. 2111 Sage Lake Road Prescott, MI 48756 Ph: 800-699-4046
MANUF. APPROVAL BY: -	SCALE: NTS	SHEET NO.			
DRAWING NO. SWTC INSTALLATION DETAIL					

KSI RISER INSTALLATION OPTIONS
FOR PAVED SURFACE APPLICATIONS

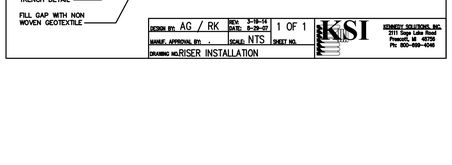
OPTION 1
KSI POLY COATED STEEL COVER



OPTION 2
EJIW FRAME & COVER



OPTION 3 –FROST SITUATION
EJIW FRAME & COVER



DESIGN BY: AG / RK	REV: 3-18-14	DATE: 8-28-07	1 OF 1	KSI	KENNEDY SOLUTIONS, INC. 2111 Sage Lake Road Prescott, MI 48756 Ph: 800-699-4046
MANUF. APPROVAL BY: -	SCALE: NTS	SHEET NO.			
DRAWING NO. RISER INSTALLATION					

OEngineering

Orman Engineering, LLC
5476 Vivian Lane
Waterford, MI 48327
phone: 248.682.6001
email: alex@ormanengineering.com

PROJECT
PROPOSED MEDICAL OFFICE BUILDING

CLIENT
2400 Trust
1359 Davis Ave.
Birmingham, MI 48009

Dan Winter
Cell: (313) 909-6800
Email:
primemangement@tir.com

SEAL

STATE OF MICHIGAN
ALEXANDER ORMAN
ENGINEER
NO. 48878
LICENSED PROFESSIONAL ENGINEER

SHEET
KSI DETAILS

PROJECT LOCATION
2400 Greenfield Rd.
City of Berkley,
Oakland County, MI 48072

811 Know what's below Call before you dig.

REVISIONS

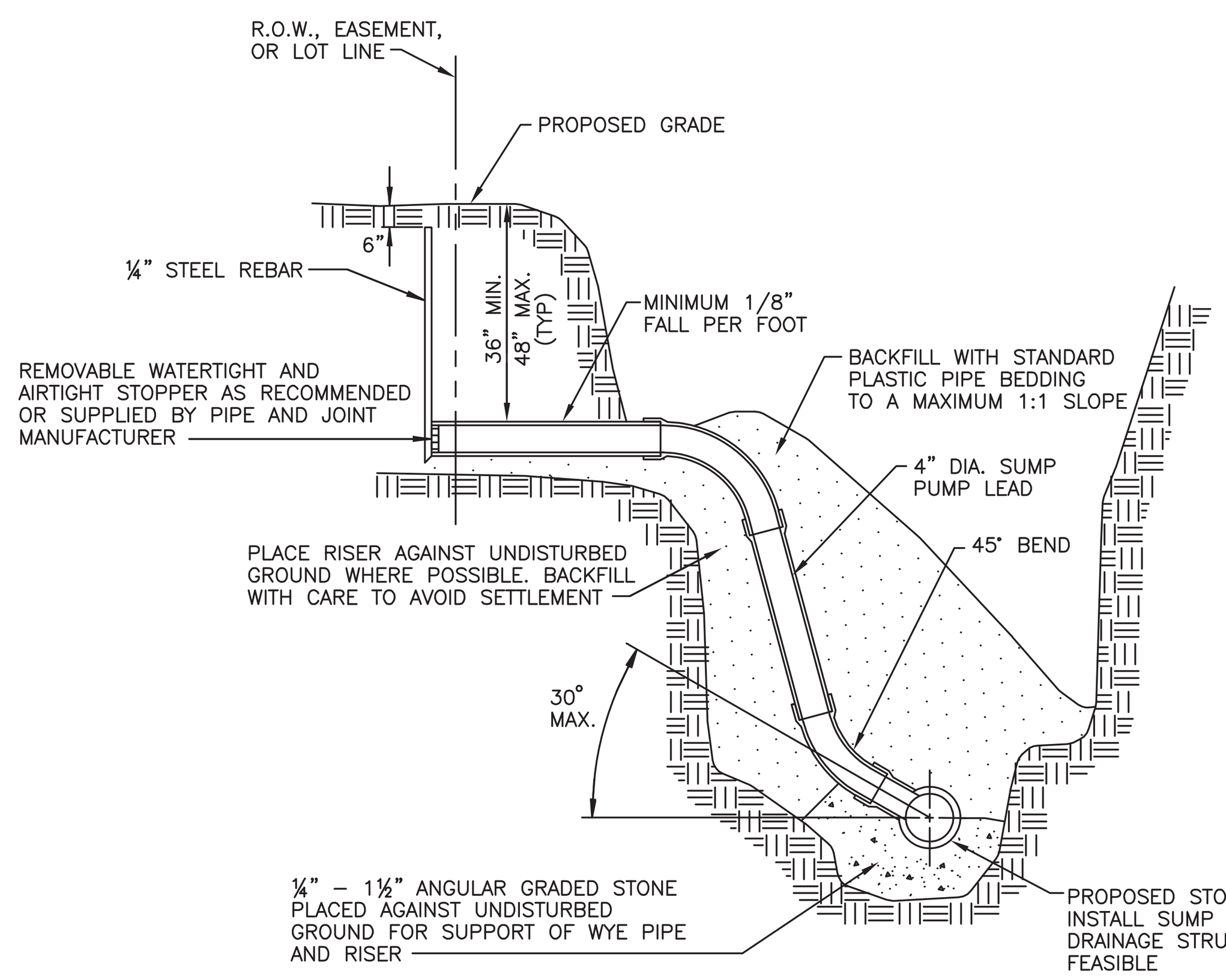
Date	Description
01-21-2022	REVISED PER CITY
12-01-2021	REVISED PER CITY
09-24-2021	SITE PLAN APPROVAL

Designed by:	Drawn by:
A.O.	S.D.M.

Approved by:	Date:
A.O.	08-17-2021

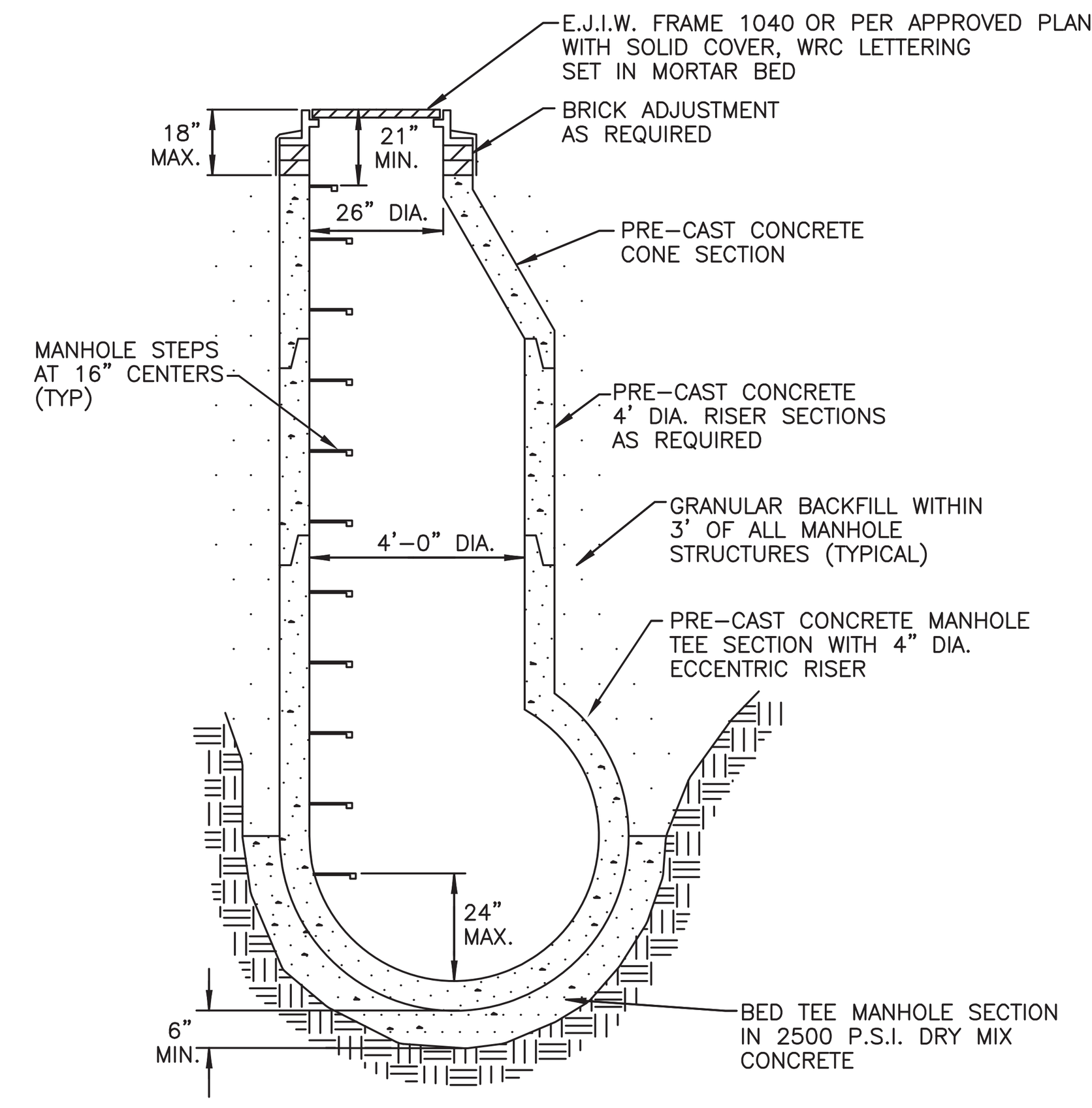
Scale:
N/A

Job No.:	Sheet:
1334	SP-7



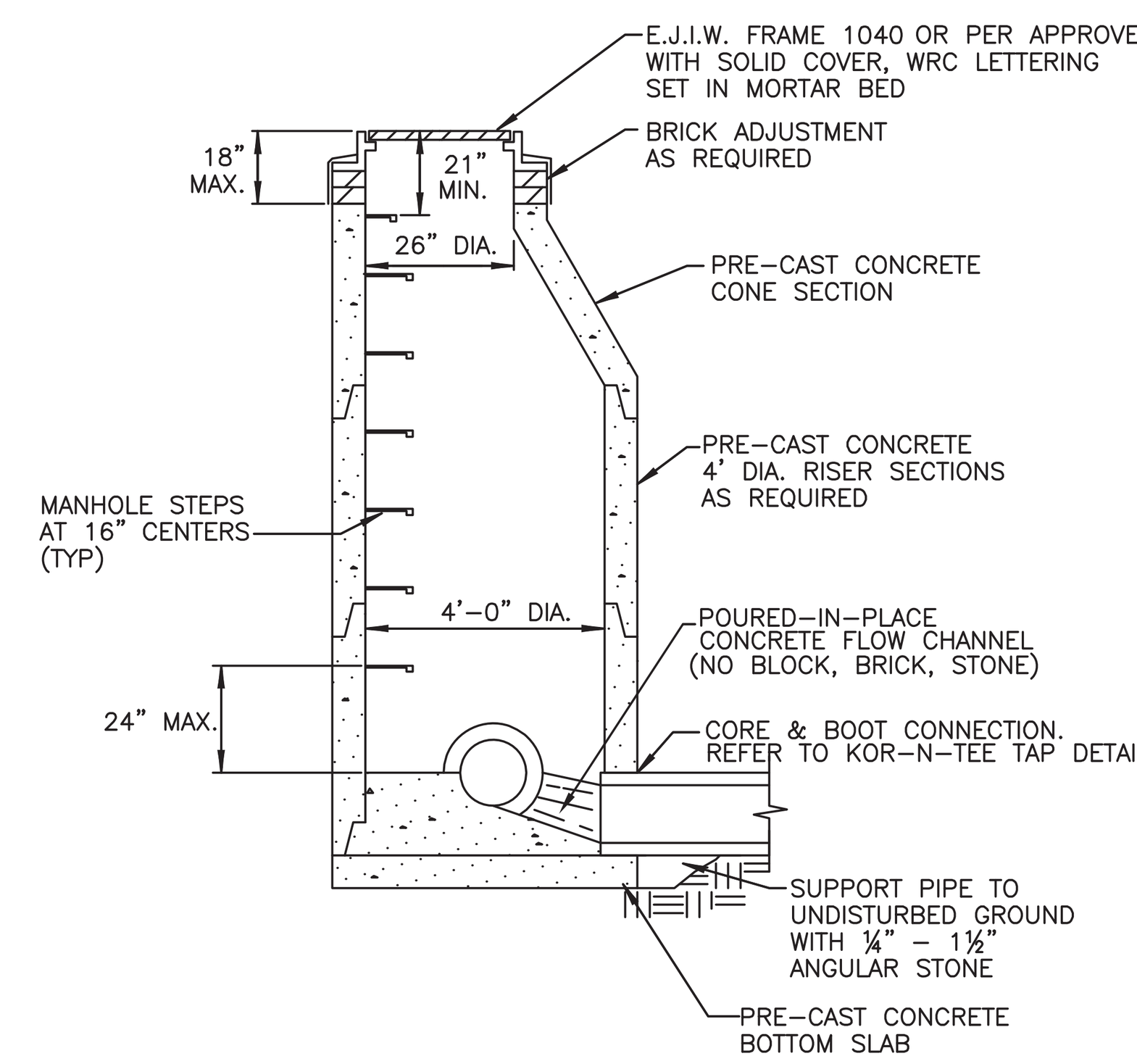
HOUSE LEAD DETAIL FOR 4" DIA. PLASTIC SUMP PUMP LEADS

NO SCALE

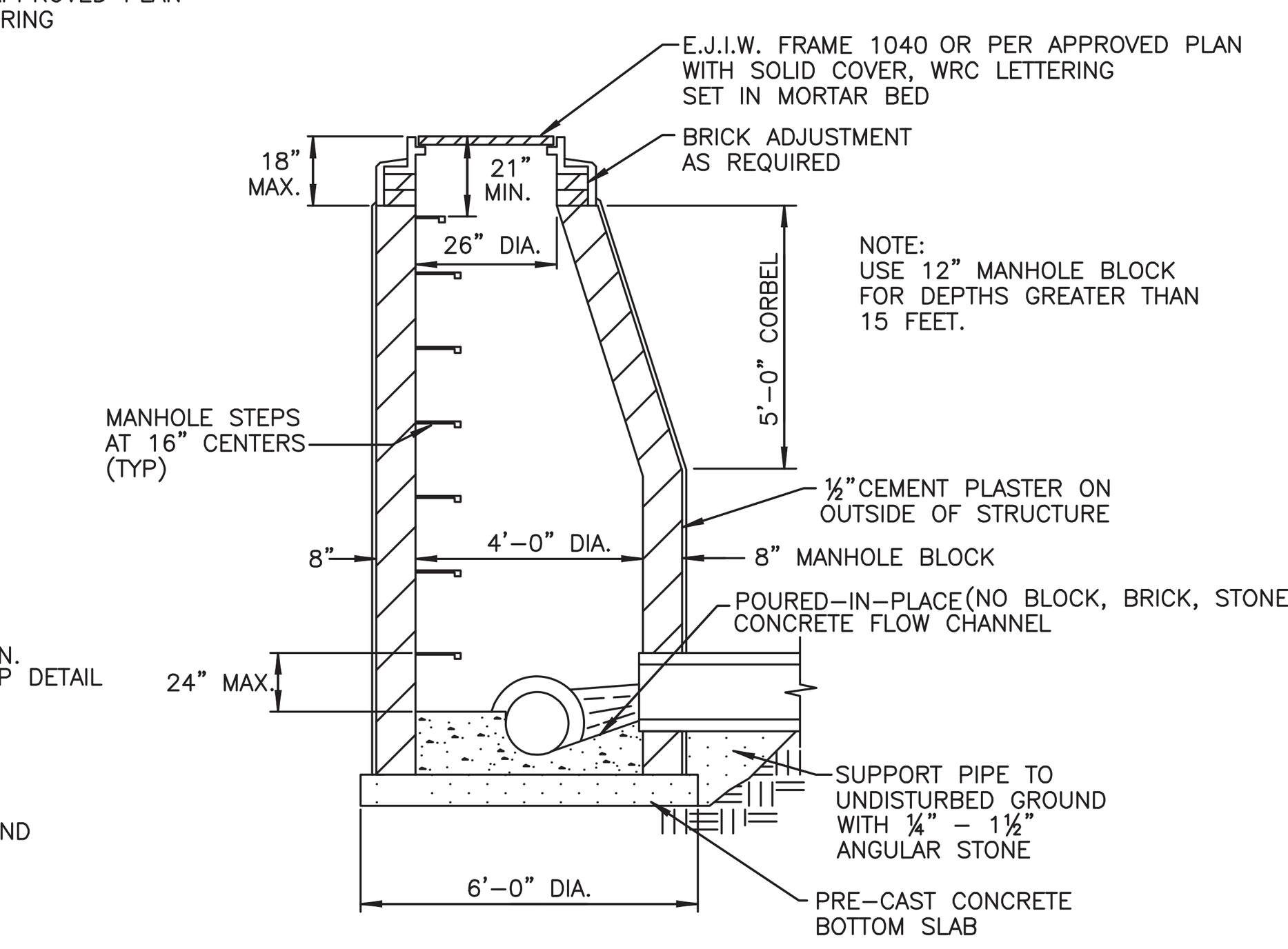


PRE–CAST TEE MANHOLE DETAIL

NO SCALE



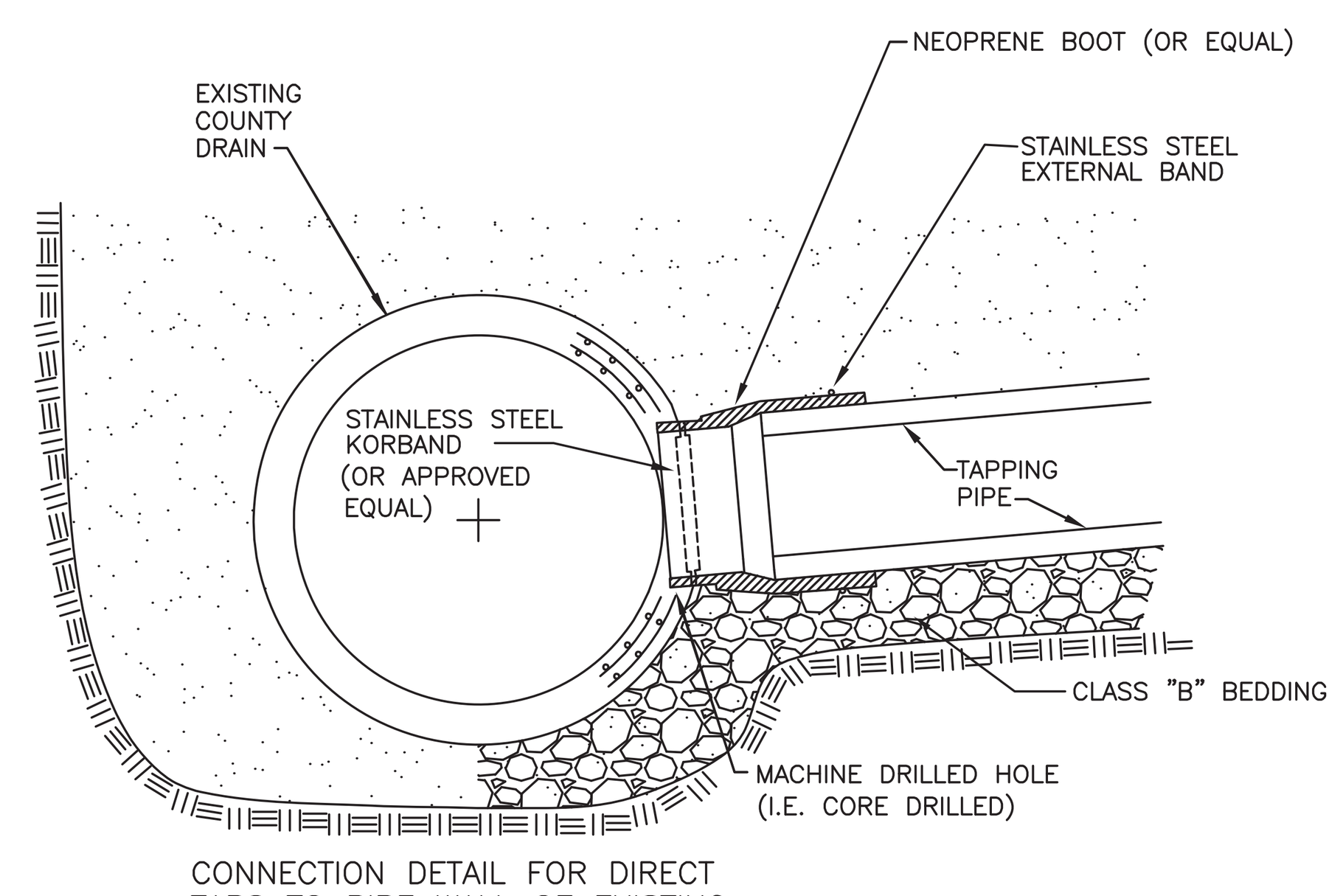
PRE–CAST MANHOLE



BLOCK MANHOLE (PRIOR APPROVAL ONLY)

STANDARD MANHOLE DETAILS

NO SCALE

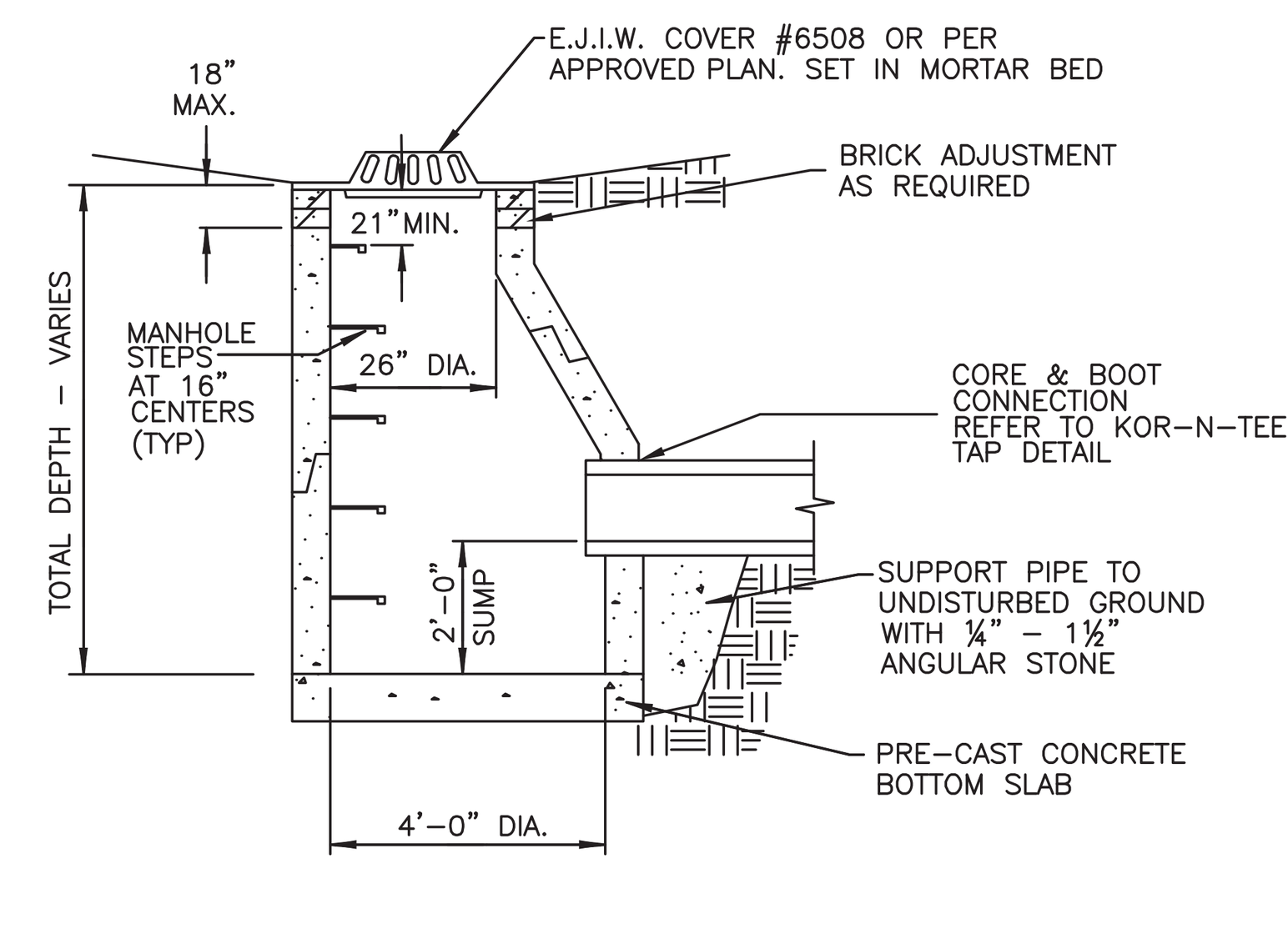


CONNECTION DETAIL FOR DIRECT TAPS TO PIPE WALL OF EXISTING COUNTY DRAINS.

KOR–N–TEE TAP (OR APPROVED EQUAL)

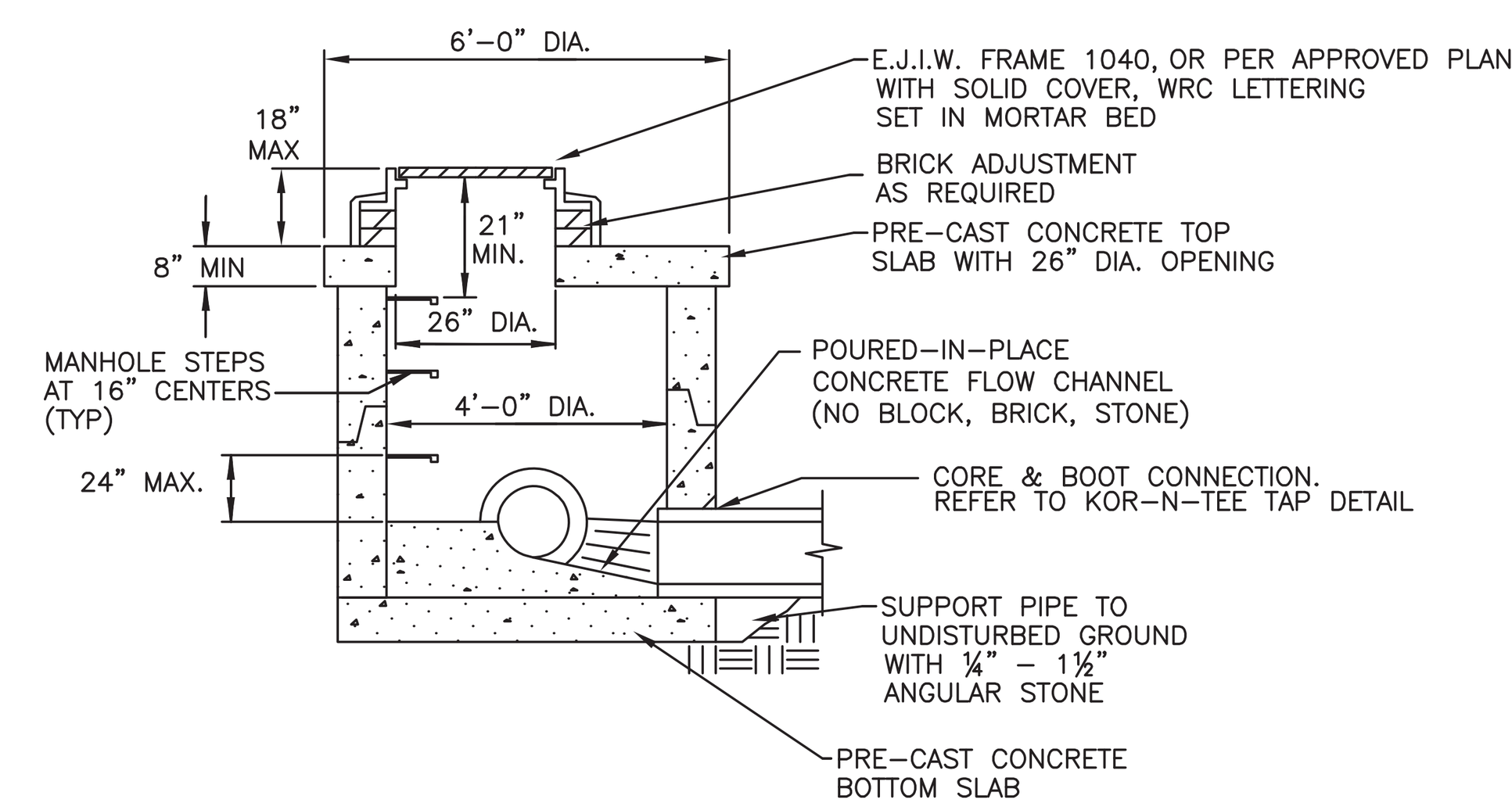
NO SCALE

* For non–concrete to concrete taps.
* Use link–seal, A–lock or approved equal for concrete to concrete taps.



PRE–CAST CATCH BASIN DETAIL

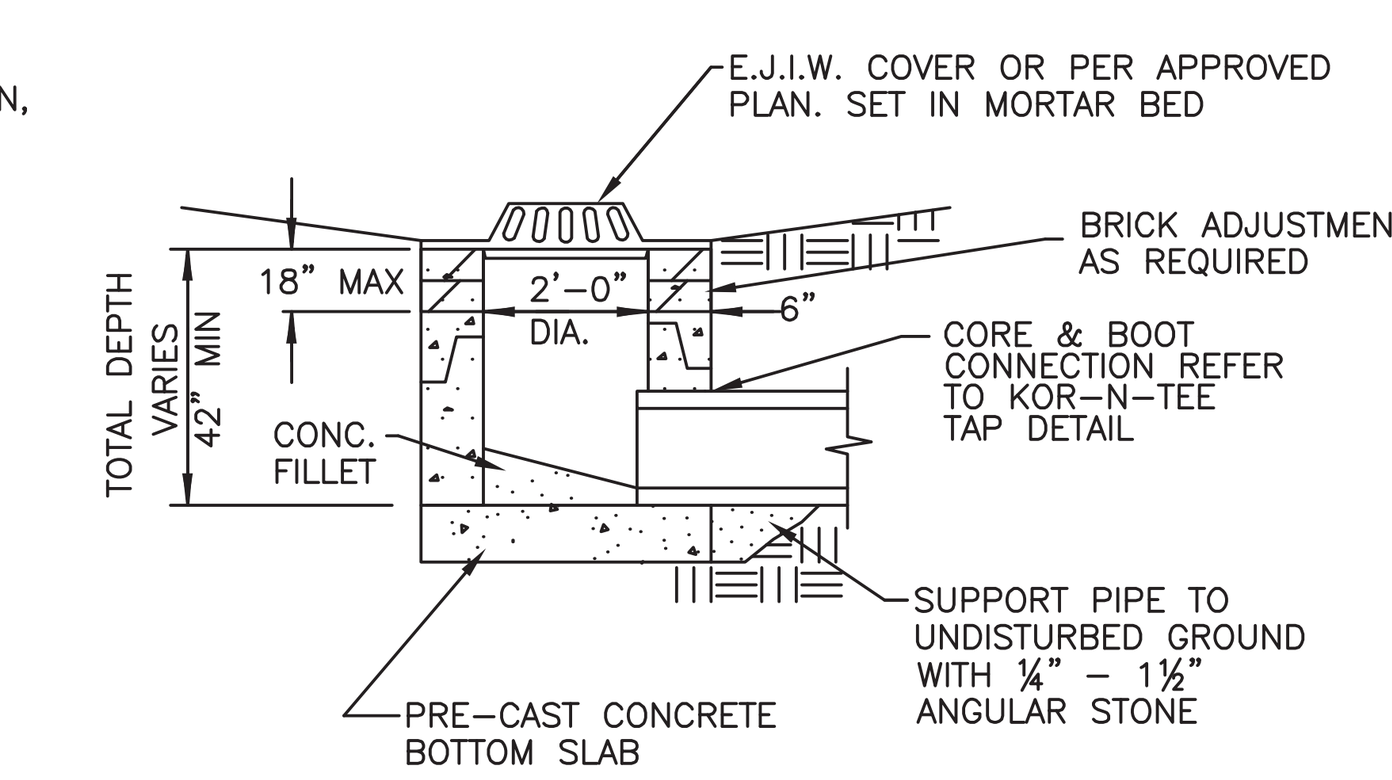
NO SCALE



PRE–CAST LOW HEAD MANHOLE DETAIL

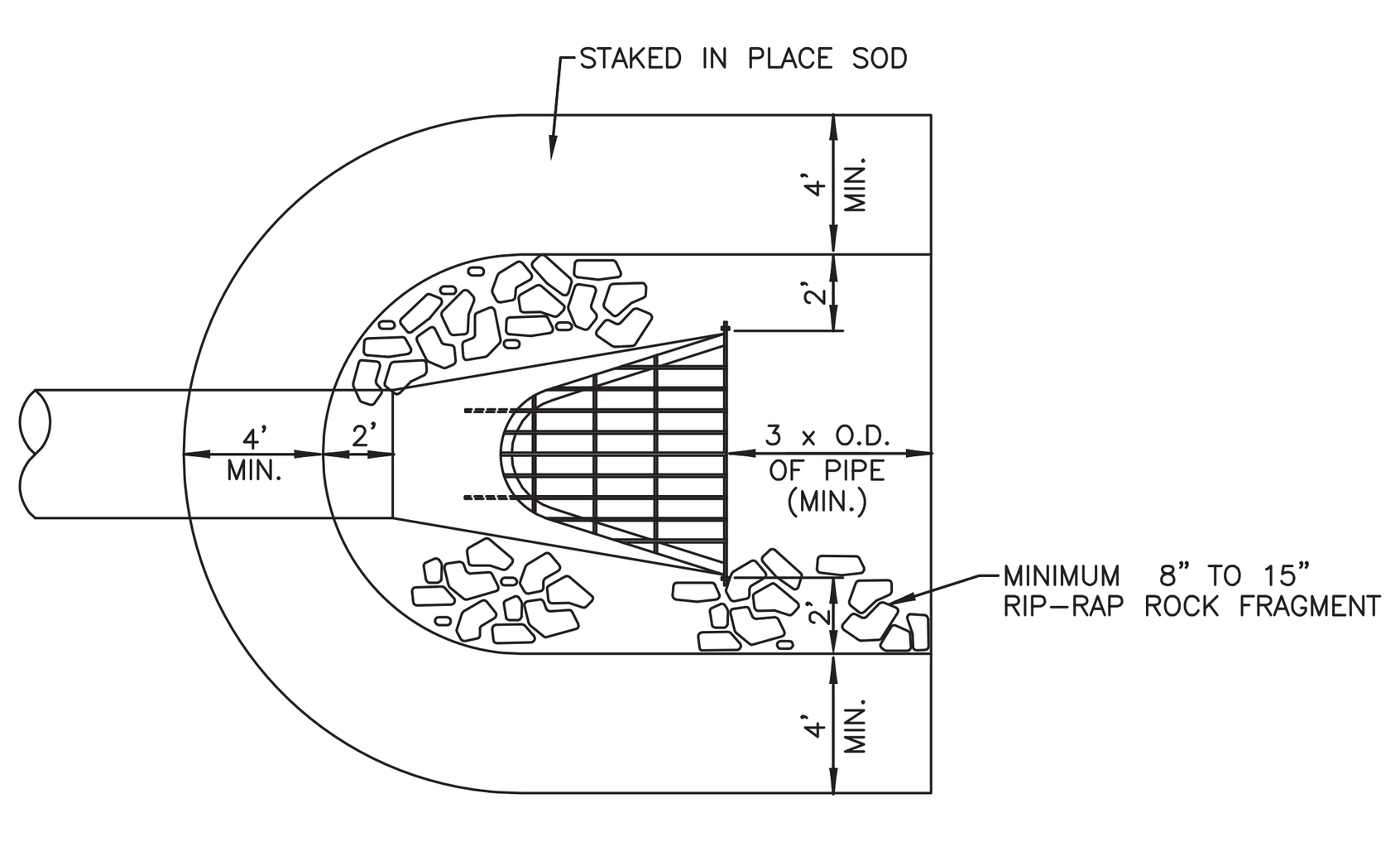
NO SCALE

(PRIOR APPROVAL ONLY)

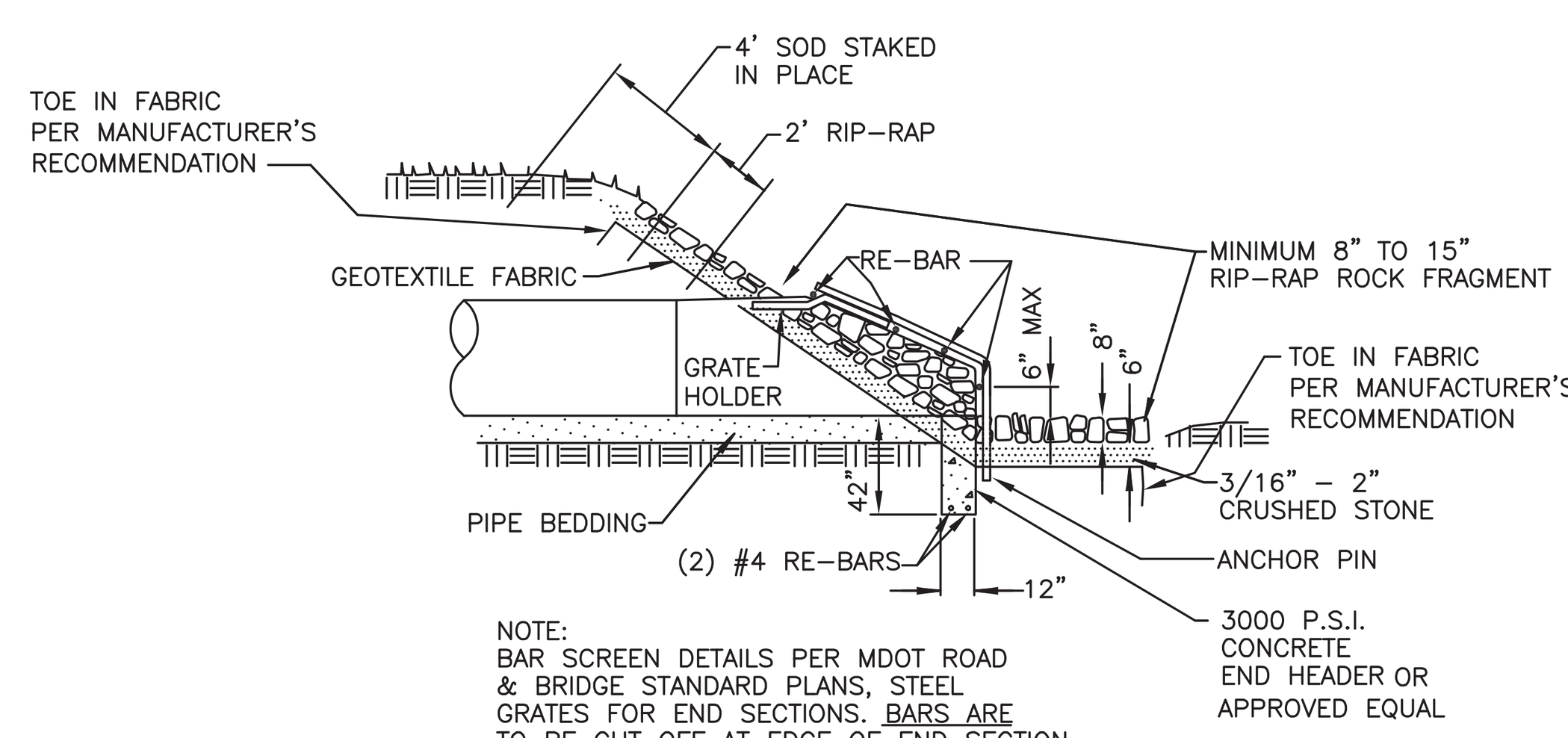


PRE–CAST INLET DETAIL

NO SCALE

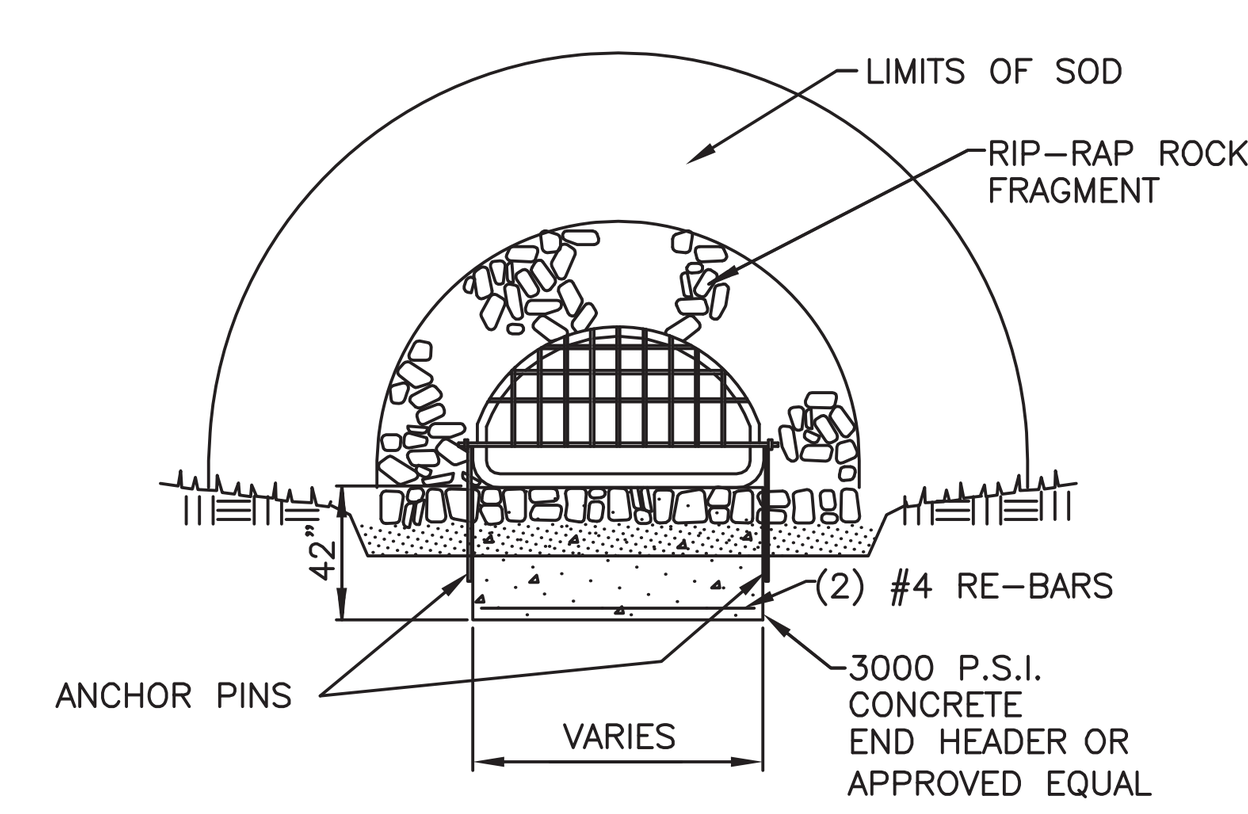


PLAN VIEW



NOTE:
BAR SCREEN DETAILS PER MDOT ROAD & BRIDGE STANDARD PLANS, STEEL GRATES FOR END SECTIONS. BARS ARE TO BE CUT OFF AT EDGE OF END SECTION.

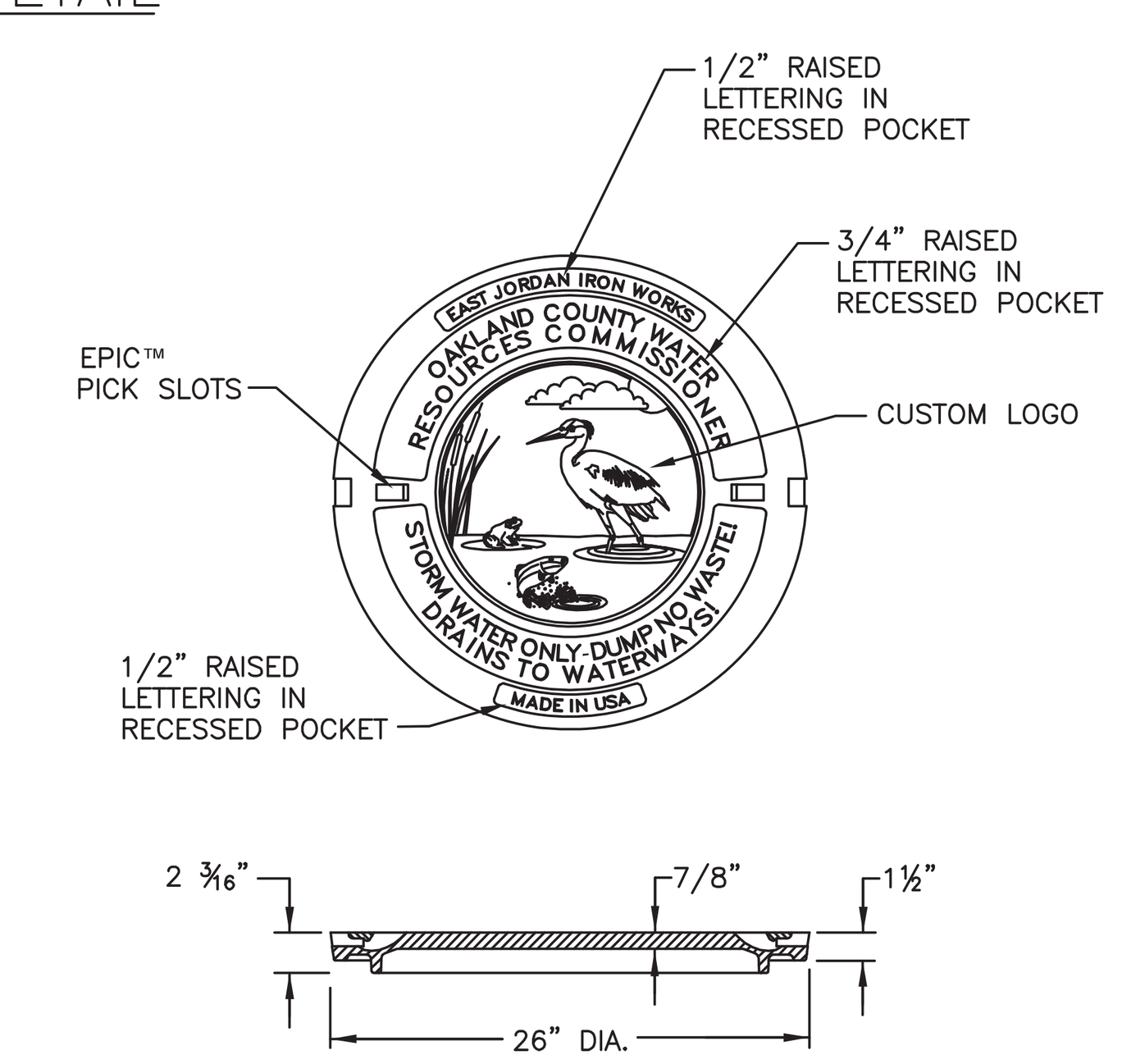
PROFILE VIEW



END VIEW

END SECTION AND BAR SCREEN DETAIL

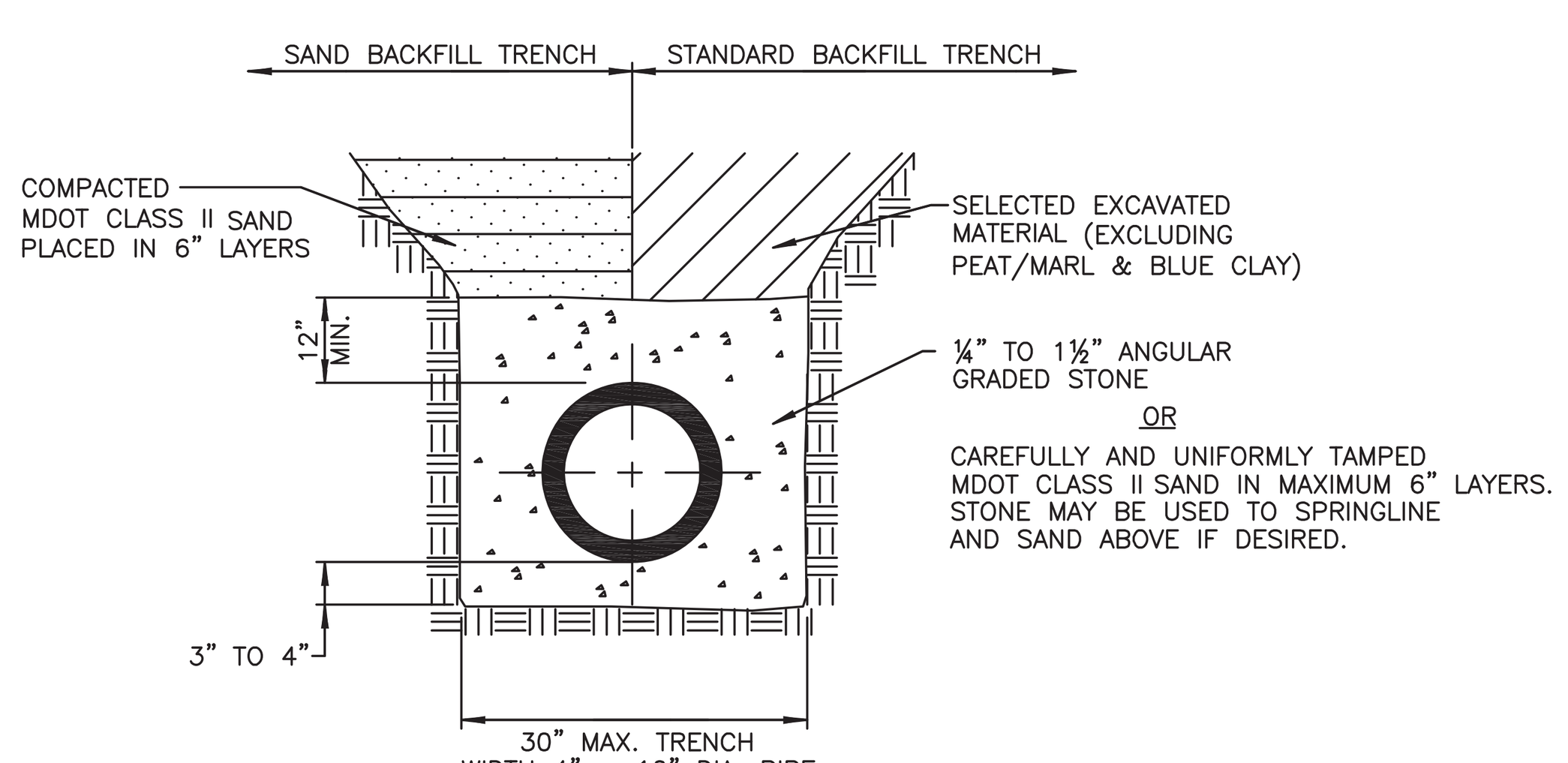
NO SCALE



EAST JORDAN IRON WORKS OR APPROVED EQUAL
HEAVY DUTY MATERIAL ASTM A48 CL.35B
CATALOG NO. 1040A
PATTERN NO. 1040A, PRODUCT NO. 104718 OAKCOSTD.
2" HIGH RAISED LETTERS, 1" WIDE RAISED LETTERS
ALL IN RECESSED POCKET.

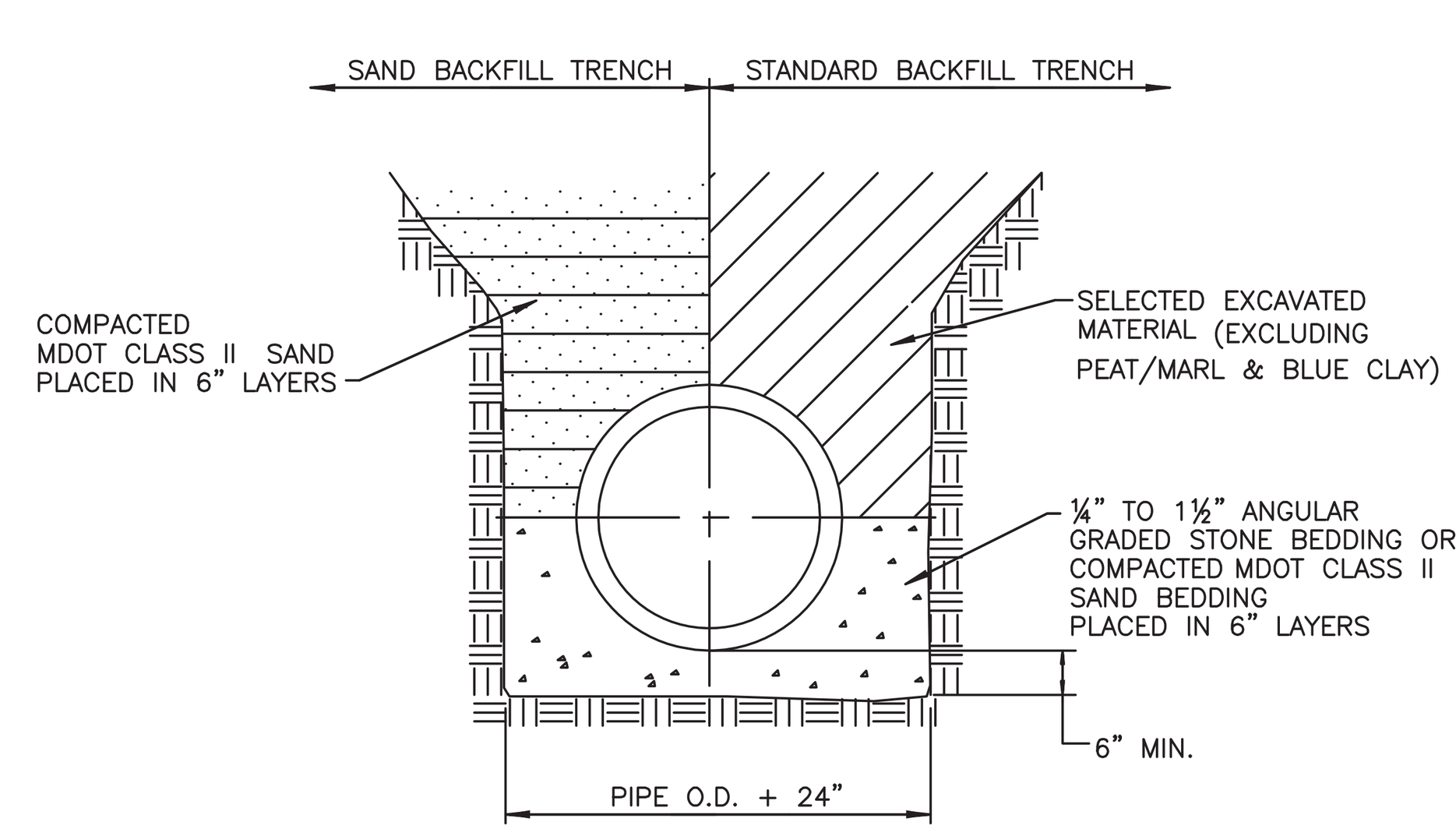
LETTERED MANHOLE COVER FOR WRC

NO SCALE



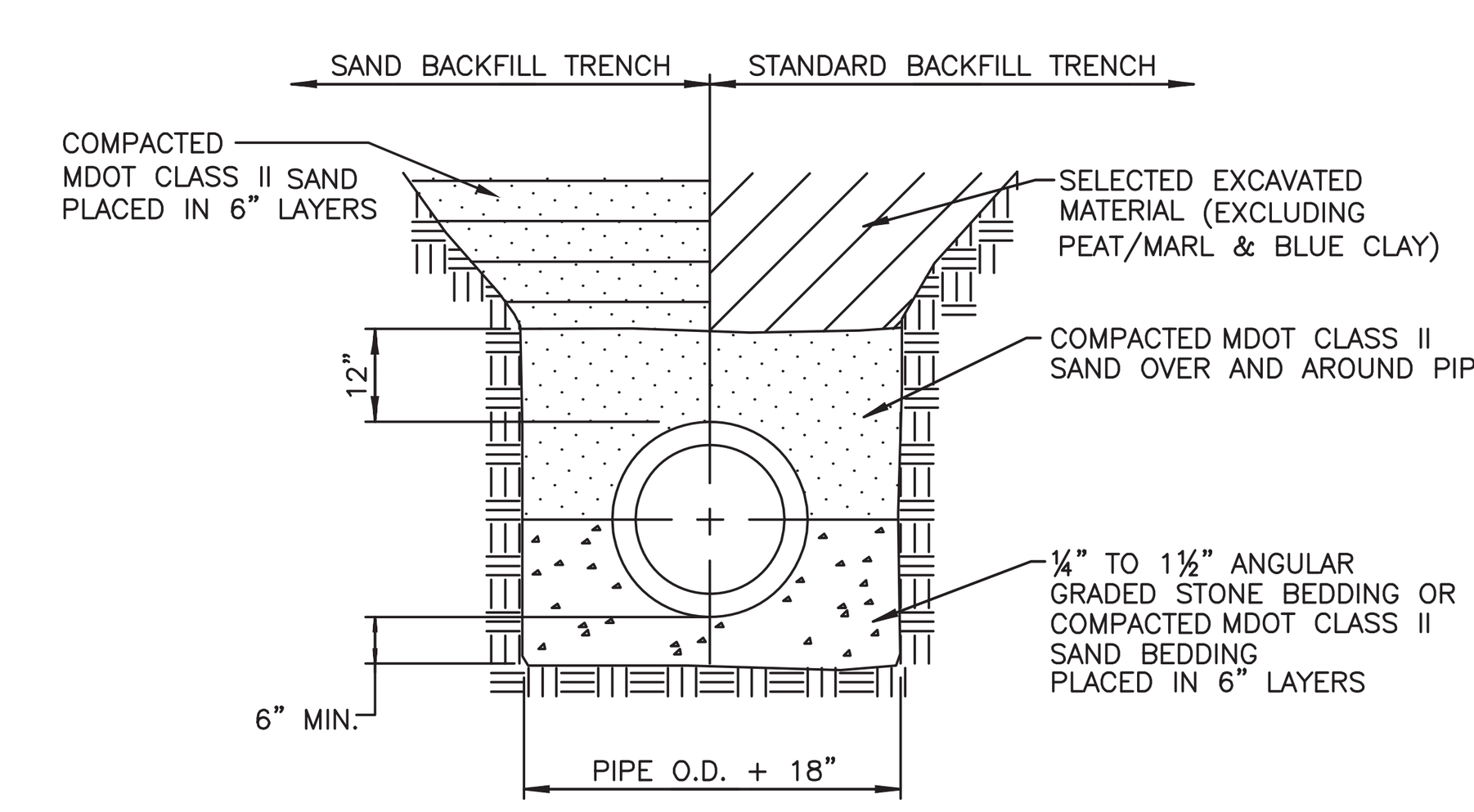
ABS (TRUSS AND SOLID WALL), PVC (TRUSS, SOLID WALL, A2000), ADS N–12 WT PIPE BEDDING DETAIL

NO SCALE



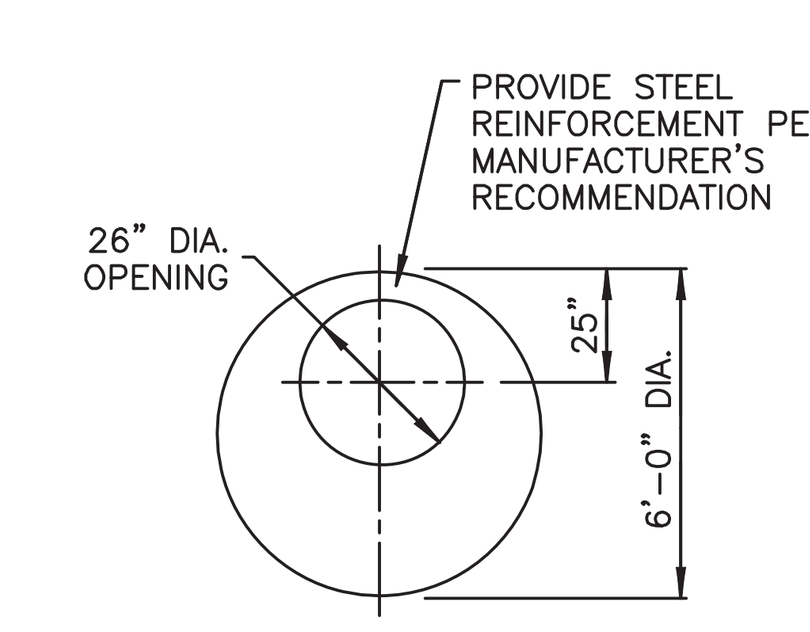
CLASS "B" BEDDING TRENCH DETAIL FOR 27" DIAMETER AND LARGER CONCRETE PIPE

NO SCALE



CLASS "B" BEDDING TRENCH DETAIL FOR 24" DIAMETER AND SMALLER CONCRETE PIPE

NO SCALE



PRECAST CONCRETE TOP SLAB DETAIL

GENERAL NOTES

1. Type and class of pipe shall be as specified on plans.
2. Class "B" bedding shall be used throughout, unless otherwise specified on the plan.
3. All end sections 18" and larger shall be provided with a bar screen unless otherwise approved.
4. Standard rip–rap shall be 8"–15" fragmented rock, heavy rip–rap shall be 16"–24" fragmented rock. (No Broken Concrete)
5. MANHOLE REQUIREMENTS:
   - All new catch basins, inlets, and manholes are to be manufactured to ASTM C–478 specifications.
   - All new catch basins, inlets, and manholes shall have WRC approved flexible, watertight seals where pipes pass through walls. Manholes shall be of precast sections with modified groove tongue and rubber gasket type joints. Pre cast manhole cone sections shall be WRC approved modified eccentric cone type.
   - Taps through manhole joints or cone sections are prohibited unless otherwise approved.
   - Manhole steps to be plastic coated steel meeting the requirements in ASTM D 2146, Type II, Grade 49108, MA. Industries P.S.I. Polypropylene, (or approved equal). Steps to be installed during manhole manufacture. Place at 16" centers 45° from centerline of sewer.
   - Cone section with modified groove tongue joints and with stud inserts cast in place. Top to have flush surface.
   - ASTM C–478 riser section with modified groove tongue joints.
   - Res–seal, link–seal, press wedge II, or kor–n–seal boot (with stainless steel korband) flexible rubber manhole joints. (or approved equal).
   - The inside joints of manholes, catch basins, and pipe sizes over 42" and larger in diameter shall be pointed up with mortar upon completion of backfilling.
6. CONCRETE PIPE REQUIREMENTS:
   - Concrete pipe to be per ASTM C76 standards.
   - It will be required to TV all pipe 30 days after installation
   - The contractor shall provide reinforced concrete pipe as specified on the plans.
   - All reinforced concrete pipe shall have modified grooved tongue joints with o–ring type rubber gasket, per A.S.T.M. specifications C443.
   - The inside joints of manholes, catch basins, and pipe sizes over 42" and larger in diameter shall be pointed up with mortar upon completion of backfilling.
7. SUMP PUMP LEAD REQUIREMENTS:
   - All sump pump leads connected to a County Drain pipe shall be pre–manufactured.
   - Sump pump leads connected to a manhole shall be cored and booted. Refer to Kor–N–Tee Tap Detail.
   - Sump pump mains and leads shall be ABS (truss and solid wall), PVC (truss, solid wall , A2000), ADS N–12 WT with premium joints.
   - Ends of all 4" sump pump leads shall be temporarily capped and their location staked, witnessed and recorded.
   - All sump pump leads to be taken to the property line, easement line or as indicated on the plan.
   - Sump pump mains must have a cleanout with a minimum inside diameter of 24" and be constructed at changes of alignment, ends of sump pump mains or as indicated on the plan.
8. RESTORATION REQUIREMENTS:

   All disturbed area within the County Drain right–of–way shall be restored as follows:
   - Under roads, sidewalks, driveways and parking areas, backfill material shall be placed loosely into trenches in six (6) inch layers with each layer compacted to not less than 95% of maximum dry density as determined by the ASTM D 1557 Compaction Standard (modified proctor compaction test). All other areas shall have each layer compacted to not less than 90% of maximum dry density.
   - Finish subgrade
   - Place 3" thickness clean topsoil acceptable to the engineer to attain finished grade. Topsoil must not be contaminated and may not be a mixture of natural underlying soils, subbase materials, or other materials. It must consist of natural loam, sandy loam, silty loam or clay loam humus–bearing soil adapted to the sustenance of plant life. Topsoil must be neither excessively acidic nor excessively alkaline. It must be of mineral origin, exclusive of any peat or muck.
   - Apply seed and fertilizer as follows:*

Location	Seeding Requirements	Fertilizer Requirement
Slopes and Ditch, Banks, Etc.	M.D.O.T. "Roadside Mix" Turf Seed Mixture TGM (10% Kentucky Blue, 20% Perennial Rye, 30% Hard Fescue, 40% Creeping Red Fescue) applied at 220 lb/acre	M.D.O.T. Seeding and Sodding Fertilizers, Class A
Other Areas	M.D.O.T. "Roadside Mix" Turf Seed Mixture THM (30% Kentucky Blue, 20% Perennial Rye, 50% Creeping Red Fescue) applied at 220 lb/acre	M.D.O.T. Seeding and Sodding Fertilizers, Class A

   * Sod is required in maintained lawn areas. Refer to WRC General Specifications for additional requirements and information.
   - apply straw or marsh hay mulch in an air–dry condition to all seeded areas over the surface to a uniform thickness at 2 tons/acre.
   - mulch shall be anchored in place with biodegradable netting, not larger than 1½" by 2" nor smaller than ½" by ½".
   - The contractor shall be responsible to insure the growth of all seeded areas, and shall re–seed as necessary to accomplish this.
9. The Storm Drain Notes and Details Sheet shall be a supplement to WRC Standards and Specifications, which are available on the WRC website (www.oakgov.com/water).

Plotfile Name: GISQtrs.ctb
File Location: J:\Drain\MappingUnit\STANDARD\DETAILS\AppProductionStandard\StormDrain\Std-Stm.dwg

STORM DRAIN NOTES
AND DETAILS

REVISION BLOCK

Data Source / Source Date: N/A

Rev. No.:	Rev. By:	Rev. Date:	Description:
1	lz	3/17/09	PROPOSED DETAIL CHANGES / NEW LOGO
2	lz	06/12/09	APPROVAL PER STANDARDS COMMITTEE
3	lz	03/29/10	REVISED MH COVER DETAIL
4	DS	04/27/10	REVISED GENERAL NOTES

ORIG. DATE:	05/05/97
SCALE:	NONE
DESIGNED BY:	WRC
DRAWN BY:	Mapping

WRC WATER RESOURCES COMMISSIONER Jim Nash

ONE PUBLIC WORKS DRIVE, BLDG 95 WEST
WATERFORD, MICHIGAN
48328-1907

SHEET NO.: 1 of 1

LEGAL DESCRIPTION:
PROPERTY LOCATED IN THE CITY OF BERKLEY, COUNTY OF OAKLAND, STATE OF MICHIGAN:

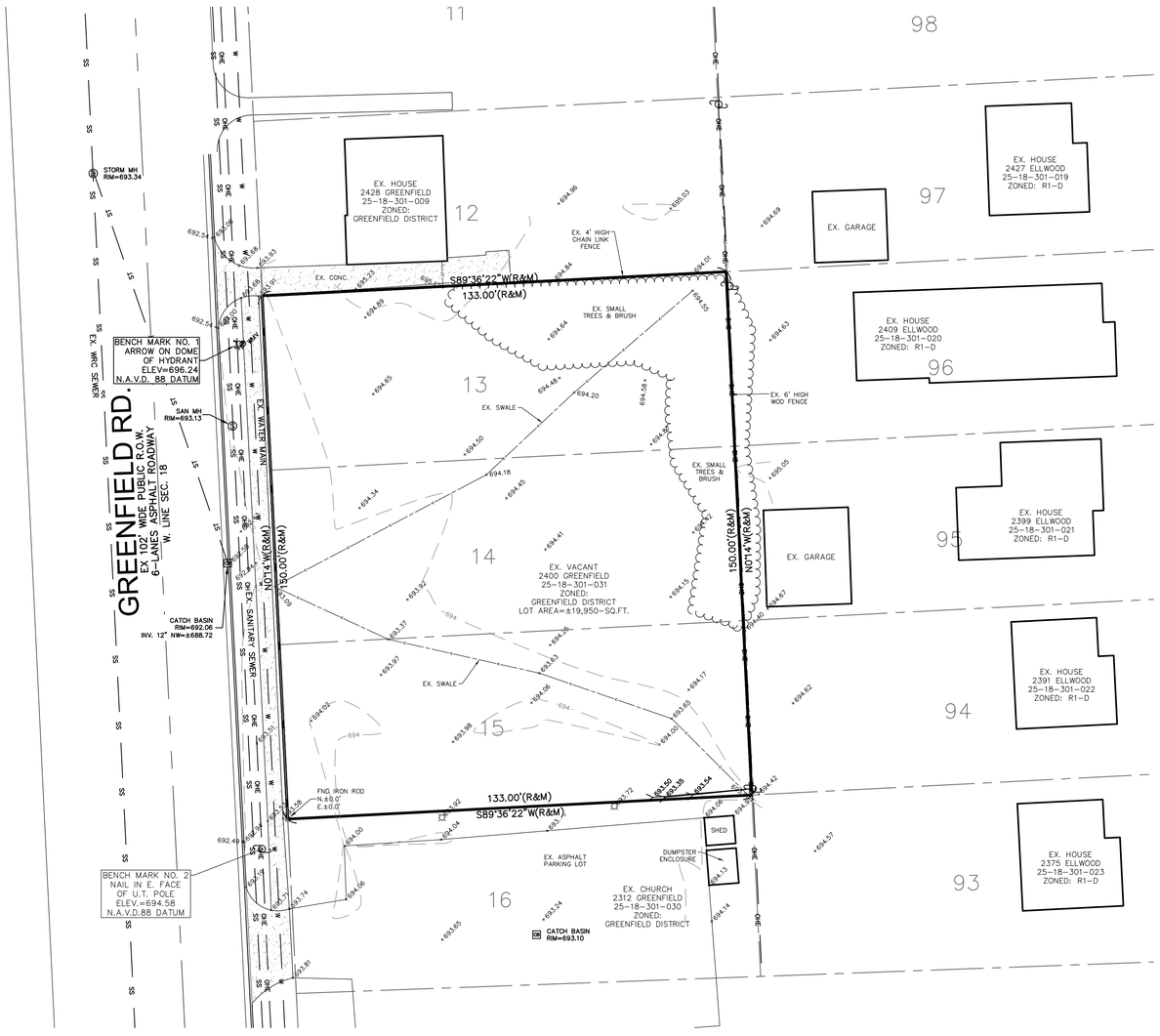
2400 GREENFIELD RD
Tax ID# 25-18-301-031
T1N, R11E, SEC 18 THOMAS PARK LOTS 13, 14, & 15.

NOTES:

BASIS OF BEARING: RIGHT OF WAY AND LOT LINE BEARINGS AND DISTANCES WERE TAKEN FROM THE THOMAS PARK SUBDIVISION AS RECORDED IN LIBER 29 OF PLATS, PAGES 19, CITY OF BERKLEY, OAKLAND COUNTY, MICHIGAN.

(M) FIELD MEASURED BEARINGS AND DISTANCES REQUIRED TO FORCE PROPER CLOSURE OF DESCRIPTION
(R) RECORDED BEARINGS AND DISTANCES PER SUBDIVISION PLAT.

NORTH



LEGEND

SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION
× 656.5	EX. SPOT ELEVATION	OHC	EX. OVERHEAD CABLE
652	EX. CONTOUR	OHF	EX. OVERHEAD FIBER
	EX. ℄ DITCH	OHE	EX. OVERHEAD ELECTRIC
	EX. GRAVEL	UC	EX. UNDERGROUND CABLE
W	EX. WATER MAIN	C	EX. COMMUNICATION RISER
	EX. WATER VALVE	CH	EX. COMMUNICATION HANDHOLE
	EX. WATER SERVICE VALVE		EX. UTILITY POLE
	EX. HYDRANT		EX. GUY ANCHOR
	EX. WATER MANHOLE		EX. SIGNAL POLE
	EX. WATER GV		EX. LIGHT POLE
W	EX. WATER METER		EX. GROUND LIGHT
ST	EX. STORM SEWER		EX. DOUBLE LIGHT POLE
	EX. STORM INLET/CATCH BASIN		EX. SINGLE POLE SIGN
	EX. ROUND STORM CATCH BASIN		EX. DOUBLE POLE SIGN
	EX. STORM MANHOLE	MB	EX. MAILBOX
	EX. STORM END SECTION		EX. FLAGPOLE
	EX. DOWN SPOUT		EX. SPEAKER
SS	EX. SANITARY SEWER		EX. UNKNOWN MANHOLE
	EX. SANITARY MANHOLE		EX. COMBO MANHOLE
	EX. CLEAN OUT		EX. SECTION LINE
	EX. SANITARY VENT		EX. PARCELS
UG	EX. UNDERGROUND GAS		EX. EASEMENT
	EX. GAS VALVE		EX. CENTERLINE
	EX. GAS METER		EX. WETLAND LIMITS
UT	EX. UNDERGROUND TELEPHONE		EX. CURB/PAVEMENT
UF	EX. UNDERGROUND FIBER OPTIC		EX. FENCE
	EX. TELEPHONE MANHOLE		EX. GUARDRAIL
	EX. TELEPHONE RISER		FOUND IRON
	EX. TELEPHONE HANDHOLE	F-RR	FOUND RR SPIKE
UG	EX. UNDERGROUND ELECTRIC	F-NAIL	FOUND PK NAIL
	EX. ELECTRIC MANHOLE		FOUND CONC. MONUMENT
	EX. ELECTRIC RISER		SET IRON ROD
	EX. ELECTRIC HANDHOLE	S-NAIL	SET MAG NAIL
	EX. ELECTRIC TRANSFORMER		SECTION CORNER
	EX. ELECTRIC METER		POST
GEN	EX. GENERATOR	BOL	BOLLARD
	EX. ASPHALT	(R)	RECORDED BEARING
	EX. CONCRETE	(M)	MEASURED BEARING
	EX. GRAVEL		EX. TREE
	EX. TREELINE		
	EX. WATER MARKER		DEMO TREE
	EX. GAS MARKER		
	EX. COMM. MARKER		
	EX. TELE. MARKER		
	EX. FIBER MARKER		
	EX. MEDIA MARKER		

CONSTRUCTION SITE SAFETY IS THE RESPONSIBILITY OF THE CONTRACTOR. NEITHER THE OWNER NOR THE ENGINEER SHALL BE EXPECTED TO ASSUME ANY RESPONSIBILITY FOR SAFETY OF THE WORK, OF PERSONS ENGAGED IN THE WORK, OF ANY NEARBY STRUCTURES, OR OF ANY OTHER PERSONS.

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THE LOCATIONS OF EXISTING UNDERGROUND UTILITIES ARE SHOWN IN AN APPROXIMATE WAY ONLY AND HAVE NOT BEEN INDEPENDENTLY VERIFIED BY THE OWNER OR ITS REPRESENTATIVE. THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION OF ALL EXISTING UTILITIES BEFORE COMMENCING WORK, AND AGREES TO BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES WHICH MIGHT BE OCCASIONED BY THE CONTRACTOR'S FAILURE TO EXACTLY LOCATE AND PRESERVE ANY AND ALL UNDERGROUND UTILITIES.

811 Know what's below. Call before you dig.

UNDERGROUND UTILITY LOCATIONS AS SHOWN ON THE PLAN, WERE OBTAINED FROM UTILITY OWNER AND NOT FIELD LOCATED.

811 Know what's below. Call before you dig.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROTECTION OF AND/OR RELOCATION OF ALL UTILITIES THAT MAY INTERFERE WITH CONSTRUCTION.

John Blanchard, Professional Surveyor
PS#4001027446

I HEREBY CERTIFY THAT I HAVE LOCATED AND MAPPED THE LAND HEREON PLATTED AND/OR DESCRIBED, ON THE DATE NOTED HEREON, THAT I HAVE COMPLIED WITH THE REQUIREMENTS OF ACT 132, P.A. OF 1970 AND THAT THE ERROR OF CLOSURE OF THE UNADJUSTED FIELD OBSERVATION IS WITHIN THE LIMITS ESTABLISHED FOR THE PROFESSION.

SEAL

STATE OF MICHIGAN
JOHN S. BLANCHARD
PROFESSIONAL SURVEYOR
No. 27446
REGISTERED PROFESSIONAL SURVEYOR

Civil Engineering
Landscape Architecture
Construction Services
Land Surveying
DIFFIN
Engineering & Surveying
24353 Tara Drive
South Lyon, MI 48178
P: 248.943.8244
F: 248.378.2564
www.Diffin-Eng.com

REVISIONS
ADDED UTILITY DATA AND EASEMENTS 6-29-21

CLIENT: ORMAN ENGINEERING
5476 VIVIAN LANE
WATERFORD, MICHIGAN 48327

TOPOGRAPHIC \ BOUNDARY SURVEY
2400 GREENFIELD

These documents are instruments of service in respect of the Project and any use without written verification or adaptation by Diffin Engineering & Surveying (DES) for the specific purposes intended will be at User's sole risk and without liability or legal exposure to DES and User shall indemnify and hold harmless DES from all claims, damages, losses and expenses including attorney's fees arising out of or resulting therefrom. Any such verification or adaptation will entitle DES to further compensation at rates to be agreed upon by User and DES.

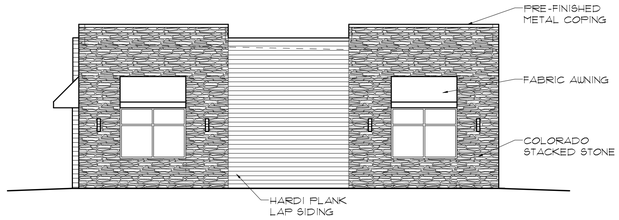
SECTION 18
TOWN 1 NORTH, RANGE 11 EAST
CITY OF BERKLEY
OAKLAND COUNTY, MICHIGAN

DATE: 7-22-21
Drawn By: XX
P.E.: MD

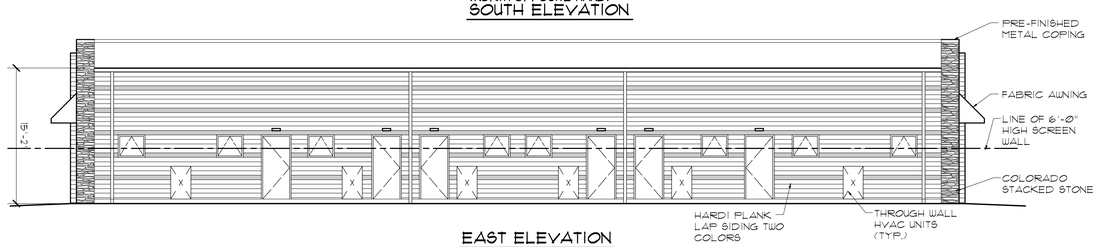
1" = 20'

Job No.: 210722
Sheet No.
1

C:\DESIGN\ORMAN ENGINEERING\2021\2400 GREENFIELD, BERKLEY\BASE-SV.DWG



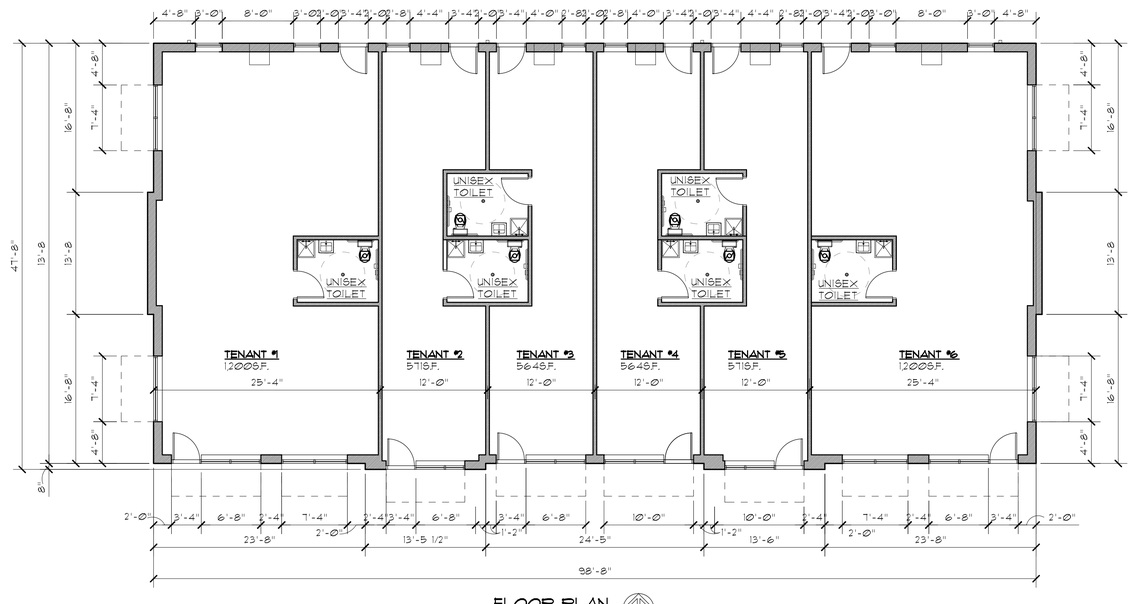
(NORTH OPPOSITE HAND)
SOUTH ELEVATION



EAST ELEVATION
SCALE: 1/8"=1'-0"



WEST ELEVATION
SCALE: 1/8"=1'-0"



FLOOR PLAN
SCALE: 1/8"=1'-0"

NORTH

STATE OF MICHIGAN
TIMOTHY JAY FOUGHT
ARCHITECT
No. 1301056975
LICENSED ARCHITECT

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PROJECT
MEDICAL OFFICE BUILDING
2400 GREENFIELD RD
BERKLEY, MI

SUBJECT
FLOOR PLAN & ELEVATIONS

ARCHITECTS
T. FOUGHT & ASSOCIATES LLC
24045 WOODLAND DR, SOUTHFIELD, MI 48034
(248) 514-7612

ISSUED:
SITE PLAN APPROVAL
09/24/2021
01/21/2021

DRAWN	T.J.F.
CHECKED	T.J.F.
APPROVED	T.J.F.
BIDS	
CONSTR.	

DO NOT SCALE PRINTS - USE FIGURED DIMENSIONS ONLY

JOB NO.
T2021014

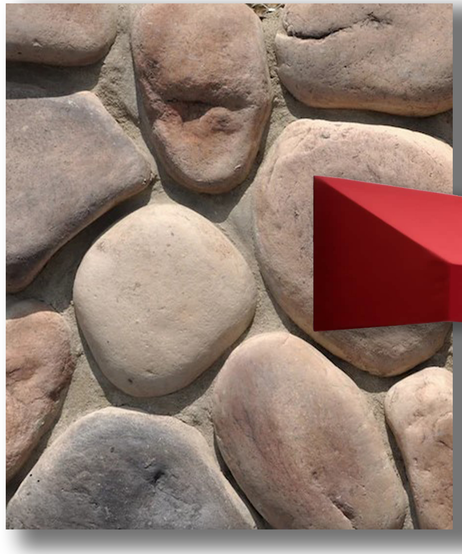
SHEET
A.1

MEDICAL OFFICE BUILDING

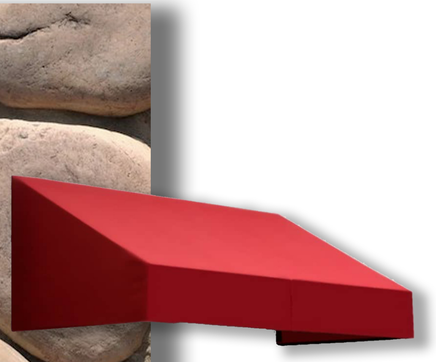


CEMENT FIBERBOARD SIDING
HARDIE PLANK
GREY WITH SMOOTH FINISH

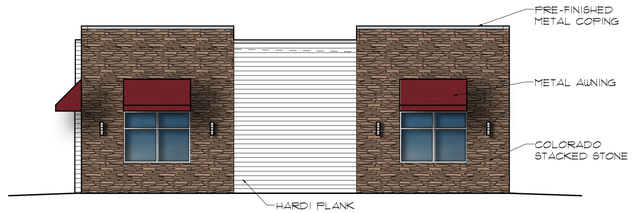
CEMENT FIBERBOARD SIDING
HARDIE PLANK
WHITE WITH SMOOTH FINISH



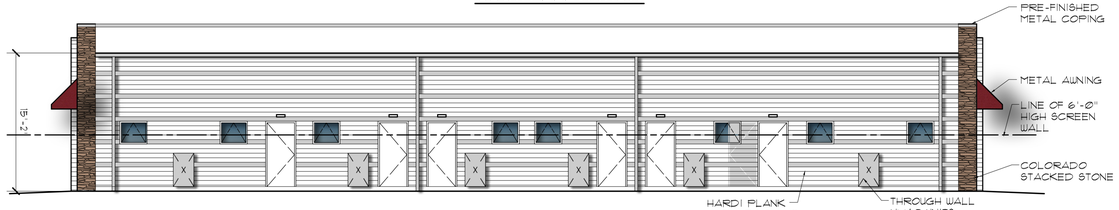
STONE VENEER



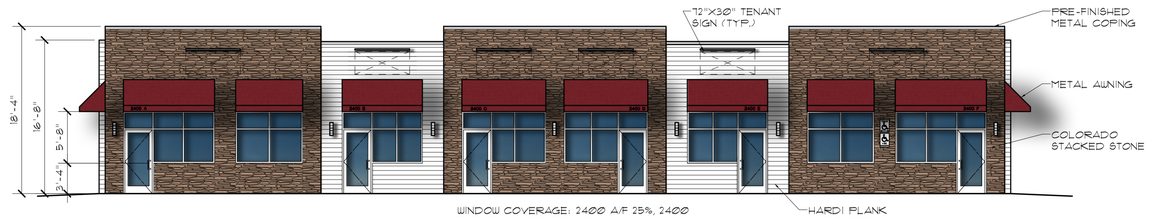
METAL CANOPY



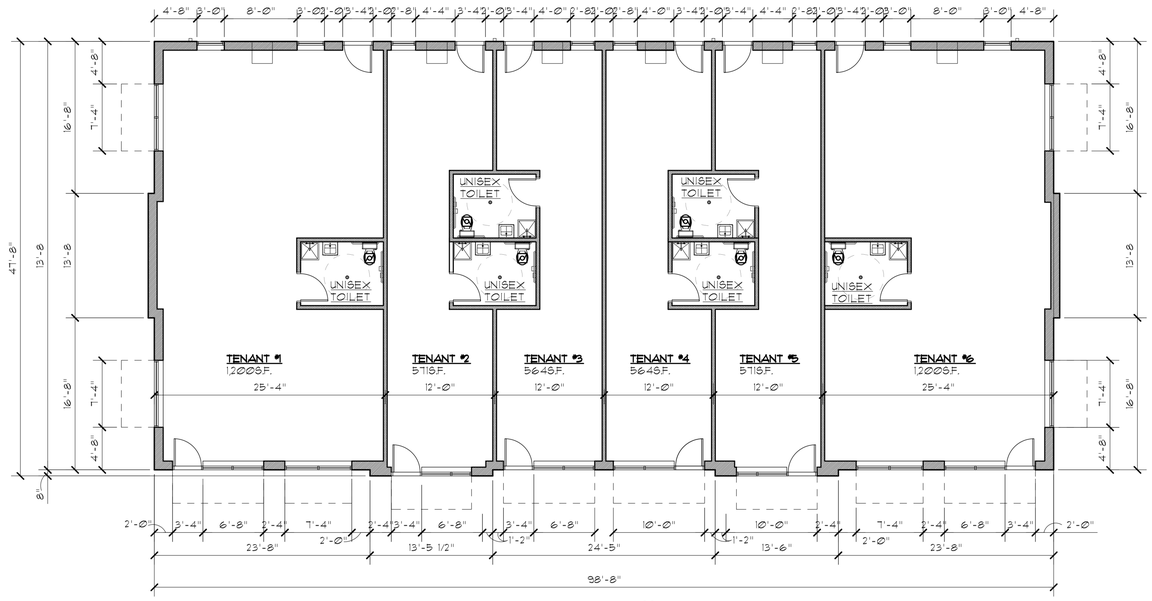
(NORTH OPPOSITE HAND)
SOUTH ELEVATION



EAST ELEVATION
SCALE: 1/8"=1'-0"



WEST ELEVATION
SCALE: 1/8"=1'-0"



FLOOR PLAN
SCALE: 1/8"=1'-0"
NORTH

STATE OF MICHIGAN
TIMOTHY JAY FOUGHT
ARCHITECT
No. 1301056975
LICENSED ARCHITECT

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PROJECT
MEDICAL OFFICE BUILDING
2400 GREENFIELD RD
BERKLEY, MI

SUBJECT
FLOOR PLAN & ELEVATIONS

ARCHITECTS
T. FOUGHT & ASSOCIATES LLC
24045 WOODLAND DR, SOUTHFIELD, MI 48034
(248) 514-7612

ISSUED:
SITE PLAN APPROVAL
09/24/2021
01/21/2021

DRAWN T.J.F.
CHECKED T.J.F.
APPROVED T.J.F.
BIDS
CONSTR

DO NOT SCALE PRINTS - USE FIGURED DIMENSIONS ONLY

JOB NO.
T2021014

SHEET
A.2

MEDICAL OFFICE BUILDING

MINW-LED

Construction:
- Housing and chassis is steel
- Diffuser is .10 extruded white acrylic
- Accent bars and rings are extruded aluminum

Light Source:
- LED
- Dimming to 10% **Included**

Notes:
- Integral mounting plate; keyhole slots left and right
- Top and bottom white acrylic lens – standard
- Not all material and accent styles are available
- Optional lens cover (ALC) eliminates up/down light
- Optional photocell (21) increases fixture depth 1 ½"
- BUG Rating: B0 - U3 - G2
- UL and CUL listed **WET** location
- LED Components
  - Replaceable Module
  - CRI > 80
  - Universal 120/277 volt standard
  - 5-Year Warranty on LED ComponentsComponents

Type:	
Job Name:	



MINW
Height - 16" - 20" - 26" - 38" - 50"
Width - 9"
Depth - 4"
MC - 8" - 10" - 13" - 19" - 25"

DIMMABLE · ETL LISTED · MADE IN AMERICA

ORDERING INFORMATION

Example: MINW-920-LED-O2C-4-B-Z3-WSA

MINW [ ] [ ] [ ] [ ] [ ] [ ] [ ] [ ]

Size	LED	Watts	Source Lumens	Dimming	Energy Star
916-LED	F1E	15	2347	DIM or DIMLD	NO
	O2C	18	2420	0-10v	NO
920-LED	O2C	18	2420	0-10v	NO
	O4B	29	4000	0-10v	NO
926-LED	O2C	18	2420	0-10v	NO
	O4C	36	4840	0-10v	NO
938-LED	O3C	27	3630	0-10v	NO
	O6C	54	7260	0-10v	NO
950-LED	O4C29	29	3412	0-10v	NO
	O4C	36	4840	0-10v	NO
	O8C	72	9680	0-10v	NO

Kelvin	Cage
2 3000K	**A**
4 4000K	**B**
	C
Optional	**D**
3 3500K	**X**

Finish
B1 Satin Black
Z1 Satin Bronze
Z3 Text Bronze
W1 Yolk
W2 Gloss White
W3 Text White
B2 Text Black
T4 Shimmer Gray
M13 Anod Silver
T6 Pewter
W13 Pearl Beige

Optional
(See Price List)
P2 Brushed Alum
P9 Brushed Nickel
M16 Antique Brass

Diffuser
WSA White Smooth Acrylic

Optional Cage Accents
(See Page 2)

Material
F Filigree
P Perforated Screen
M Wire Mesh
W Waffle Pattern

Style
SC Screen Complete
CC Center Complete
CH Center Half
EC Ends Complete
SF Sides Full
CF Center Full
OX Custom

Options
DIM LED dimming driver (0 - 10v) Dimming to 10% (**Included**)

21 Photocell - Spedify voltage
01 - 120 volt
02 - 277 volt

42 All Aluminum Construction

ALC Aluminum Lens Cover - *See Notes*

Battery Backup Options
(Available with 0-10v only)
BB10 10 Watts (1170lm) for 90-Minutes

28435 Industry Drive, Valencia, California 91355
West Coast Sales: 800-325-4448 /661-257-0286 • fax 800-323-2346 /661-257-0201
East Coast Sales: 866-350-0901 • fax 866-490-5754
www.lightwayind.com • sales@lightwayind.com

Lightway

Revision: 05/11/2021



WDGE1 LED
Architectural Wall Sconce

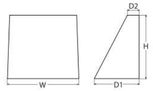
DLC DLC PLUS

Catalog Number
Notes
Type

Please see this page to see all ordering elements

Specifications

Depth (D1):	5.5"
Depth (D2):	1.5"
Height:	8"
Width:	9"
Weight: (without options)	9 lbs



Introduction

The WDGE LED family is designed to meet specifier's every wall-mounted lighting need in a widely accepted shape that blends with any architecture. The clean rectilinear design comes in four sizes with lumen packages ranging from 1,200 to 25,000 lumens, providing true site-wide solution.

WDGE1 delivers up to 2,000 lumens with a soft, non-pixelated light source, creating a visually comfortable environment. The compact size of WDGE1, with its integrated emergency battery backup option, makes it an ideal over-the-door wall-mounted lighting solution.

WDGE LED Family Overview

Luminaire	Standard EM, 0°C	Cold EM, -20°C	Sensor	Lumens (4000K) P1	P2	P3	P4	P5	P6
WDGE1 LED	4W	--	--	1,200	2,000	--	--	--	--
WDGE2 LED	10W	18W	Standalone / nLight	1,200	2,000	3,000	4,500	6,000	--
WDGE3 LED	15W	18W	Standalone / nLight	7,500	8,500	10,000	12,000	--	--
WDGE4 LED	--	--	Standalone / nLight	12,000	16,000	18,000	20,000	22,000	25,000

Ordering Information

EXAMPLE: WDGE1 LED P2 40K 80CRI VF MVOLT SRM PE DDBXD

Series	Package	Color Temperature	CRI	Distribution	Voltage	Mounting
WDGE1 LED	P1	27K 2700K	80CRI	VF Visual comfort forward throw	MVOLT	**Shipped included**
	P2	30K 3000K	90CRI	VW Visual comfort wide	347*	SRM Surface mounting bracket
		35K 3500K				ICW Indirect Canopy/Ceiling Washer bracket (dry/damp locations only)†
		40K 4000K				**Shipped separately**
		50K* 5000K				AWS 5/8inch Architectural wall spacer
						BBW Surface-mounted back box
						PBBW Premium surface-mounted back box (top, left, right conduit entry)

Options		Finish			
E4WH[1]	Emergency battery backup, CEC compliant (4W, 0°C min)	DDBXD	Dark bronze	DDBTXD	Textured dark bronze
PE[2]	Photocell, Button Type	DBLBD	Black	DBLBXD	Textured black
DS	Dual switching (comes with 2 drivers and 2 light engines; see page 3 for details)	DNATD	Natural aluminum	DNATXD	Textured natural aluminum
DMG	0-10V dimming wires pulled outside fixture (for use with an external control, ordered separately)	DWHGD	White	DWHGXD	Textured white
DCL	Bottom conduit entry for premium back box (PBBW). Total of 4 entry points.	DSSTD	Sandstone	DSSTXD	Textured sandstone

Accessories
Ordered and shipped separately.
WSQUARE DDBXD U — WSQ 2 Inch Architectural Wall Spacer (specify finish)
WSQ2 PBBW DDBXD U — WSQ2 Premium surface-mounted back box (specify finish)
WSBBW DDBXD U — Surface - mounted back box (specify finish)

NOTES
1 50K not available in 90CRI.
2 347V not available with E4WH, DS or PE.
3 E4WH not available with PE or DS.
4 PE not available with DS.
5 Not qualified for DLC. Not available with E4WH.

LITHONIA LIGHTING COMMERCIAL OUTDOOR
One Lithonia Way • Conyers, Georgia 30012 • Phone: 1-800-705-SERV (7378) • www.lithonia.com
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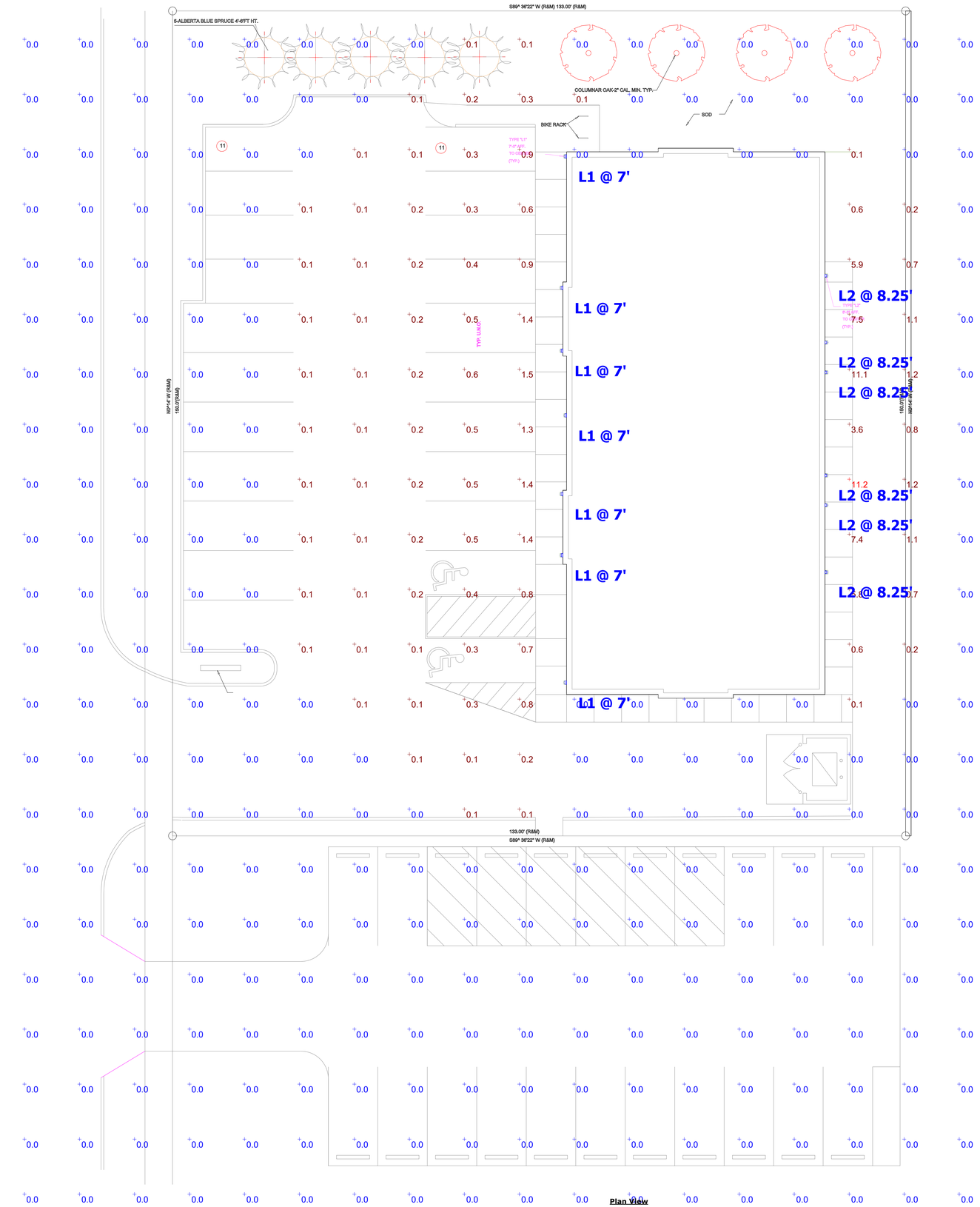
WDGE1 LED
Rev. 04/15/20



Plan View
Scale - 1" = 10ft

Schedule									
Symbol	**Label**	**Quantity**	**Manufacturer**	**Catalog Number**	**Description**	**Lamp**	**Lumens Per Lamp**	**Light Loss Factor**	**Wattage**
	L1	7	LIGHTWAY INDUSTRIES, INC	MINW-916-LED-U-11W	4"L. X 9"W. X 16"H. LED WALL SCONCE DIFFUSED LENS	LED	1045	0.9	12.5
	L2	6	Lithonia Lighting	WDGE1 LED P1 40K 80CRI VW	WDGE1 LED WITH P1 - PERFORMANCE PACKAGE, 4000K, 80CRI, VISUAL COMFORT WIDE OPTIC	LED	1229	0.9	10.0002

Statistics

Description	Symbol	Avg	Max	Min	Avg/Min	Max/Min
Grade @ 0'	+	0.2 fc	11.2 fc	0.0 fc	N/A	N/A

General Note
1. SEE SCHEDULE FOR LUMINAIRE MOUNTING HEIGHT.
2. CALCULATIONS ARE SHOWN IN FOOTCANDLES AT: 0' - 0"
3. LIGHTING ALTERNATES REQUIRE NEW PHOTOMETRIC CALCULATION AND RESUBMISSION TO CITY FOR APPROVAL.

THE ENGINEER AND/OR ARCHITECT MUST DETERMINE APPLICABILITY OF THE LAYOUT TO EXISTING / FUTURE FIELD CONDITIONS. THIS LIGHTING LAYOUT REPRESENTS ILLUMINATION LEVELS CALCULATED FROM LABORATORY DATA TAKEN UNDER CONTROLLED CONDITIONS IN ACCORDANCE WITH ILLUMINATING ENGINEERING SOCIETY APPROVED METHODS. ACTUAL PERFORMANCE OF ANY MANUFACTURER'S LUMINAIRE MAY VARY DUE TO VARIATION IN ELECTRICAL VOLTAGE, TOLERANCE IN LAMPS, AND OTHER VARIABLE FIELD CONDITIONS. MOUNTING HEIGHTS INDICATED ARE FROM GRADE AND/OR FLOOR UP.

THESE LIGHTING CALCULATIONS ARE NOT A SUBSTITUTE FOR INDEPENDENT ENGINEERING ANALYSIS OF LIGHTING SYSTEM SUITABILITY AND SAFETY. THE ENGINEER AND/OR ARCHITECT IS RESPONSIBLE TO REVIEW FOR MICHIGAN ENERGY CODE AND LIGHTING QUALITY COMPLIANCE.

UNLESS EXEMPT, PROJECT MUST COMPLY WITH LIGHTING CONTROLS REQUIRMENTS DEFINED IN ASHRAE 90.1 2013. FOR SPECIFIC INFORMATION CONTACT GBA CONTROLS GROUP AT ASG@GASSERBUSH.COM OR 734-266-6705.

FOR ORDERING INQUIRIES CONTACT GASSER BUSH AT QUOTES@GASSERBUSH.COM OR 734-266-6705.

THIS DRAWING WAS GENERATED FROM AN ELECTRONIC IMAGE FOR ESTIMATION PURPOSE ONLY. LAYOUT TO BE VERIFIED IN FIELD BY OTHERS.

MOUNTING HEIGHT IS MEASURED FROM GRADE TO FACE OF FIXTURE. POLE HEIGHT SHOULD BE CALCULATED AS THE MOUNTING HEIGHT LESS BASE HEIGHT.

2400 GREENFIELD ROAD
PHOTOMETRIC PLAN
GASSER BUSH ASSOCIATES
WWW.GASSERBUSH.COM

Designer
DS/KB
Date
08/30/2021
rev. 11/18/2021
Scale
Not to Scale
Drawing No.
#21-66026 V2
1 of 1

CITY OF BERKLEY
COMMUNITY DEVELOPMENT
3338 COOLIDGE HWY, BERKLEY, MICHIGAN 48072

MEMORANDUM

TO: Berkley Planning Commission

FROM: Megan Masson-Minock; Interim Community Development Director

SUBJECT: **PSP-02-21; 2400 Greenfield Rd – New Construction of Office Building**
Site Plan Approval
Plan Date: January 21, 2022

DATE: February 18, 2022

Attached are the following reviews for the site plan submitted:

Planning Review from Carlisle Wortman Associates (CWA) dated January 31, 2022

CWA recommended approval of the site plan with the following conditions:

1. Confirm transparency.
2. Applicant considers additional landscaping.
3. Indicate location stone veneer.
4. Applicant shall show exterior appliances (air conditioners, generators, etc.) on site plan to ensure compliance with Sec. 138-73.

Engineering Review from Hubbell, Roth & Clark (HRC) dated February 8, 2022

HRC recommended approval of the site plan with subject to the applicant obtaining and submitting copies of the geotechnical report which confirms the feasibility of the underground storm system for the site soils as well as any necessary permits.

Review for City of Berkley Department of Public Works (DPW) dated February 7, 2022

DPW had several items that need to be provided to the City prior to scheduling a preconstruction meeting. The Planning Commission should note the following:

1. Greenfield Road is under the jurisdiction of RCOC. An RCOC permit must be provided to the City prior to the preconstruction meeting.

2. A stormwater maintenance agreement shall be signed and finalized, prior to the preconstruction meeting.
3. A traffic control plan and sequence of construction shall be submitted to cover the ROW activities, prior to the preconstruction meeting.
4. A construction schedule shall be provided with dates and durations of all major work items, including final restoration, prior to the preconstruction meeting.

Please note that Fire Inspector Pete Kelly has signed and approved the site plan submitted.

Summary and Recommendation

The Planning Commission needs to make a determination on whether additional landscaping is needed.

We recommend the Planning Commission approve this site plan request with the following conditions:

1. RCOC approval.
2. Parcel combination finalized.
3. All issues in the following review letters are addressed:
    a. City Department of Public Works dated February 7, 2022
    b. Hubbell, Roth & Clark dated February 8, 2022
    c. Carlisle Wortman Associates dated January 31, 2022

Carlisle | Wortman
ASSOCIATES, INC.
117 NORTH FIRST STREET SUITE 70 ANN ARBOR, MI 48104 734.662.2200 734.662.1935 FAX

Date: January 31, 2022

Site Plan Review
For
City of Berkley, Michigan

Applicant: 2400 Trust

Project Name: 2400 Greenfield-Medical Office Building

Plan Date: January 21, 2022

Location: 2400 Greenfield Road

Zoning: Greenfield District

Action Requested: Site Plan Approval

SITE DESCRIPTION

The subject site is on the east side of Greenfield Road, just north of Oxford. The applicant proposes to construct a 4,700 sq/ft medical and professional office building. The site is three (3) parcels, which are all vacant. The 0.45-acre site is zoned Greenfield District. Medical and professional office is a permitted use in the Greenfield District.

Richard K. Carlisle, *President* Douglas J. Lewan, *Executive Vice President* John L. Enos, *Principal*
David Scurto, *Principal* Benjamin R. Carlisle, *Principal* Sally M. Elmiger, *Principal* Craig Strong, *Principal* R. Donald Wortman, *Principal*
Laura K. Kreps, *Associate* Paul Montagno, *Associate*

Site Location:



Proposed Uses of Subject Parcel:

A 4,700 sq/ft speculative medical and professional office building

Current Use of Subject Property:

The subject property is currently vacant

Surrounding Property Details:

Direction	Zoning	Use
North	Greenfield District	Single-family Residential
South	Greenfield District	Place of Worship and parking lot
East	R-1D, Single-Family District	Single-family Residential
West	City of Southfield	Park

Items to be addressed: *None.*

NATURAL FEATURES

The site has been graded. No natural features exist.

BUILDING ARRANGEMENT AND SITE DESIGN

The site will be accessed via a curb cut off Greenfield. The office building is setback back at the rear of the site. Parking is located in front (adjacent to Greenfield).

Items to be addressed: *None*

AREA, WIDTH, HEIGHT, SETBACKS

Sec. 138-397- Schedule of regulations of the Zoning Ordinance establishes the dimensional requirements for the Greenfield District.

Please note: The setback standards in the Greenfield District differ from other zoning districts, in that the setbacks are dictated by height of the proposed building and the height or type of land use on the adjacent property.

If new development is…	**And is next to….**	**Then required separation is at least…**
A building 30 ft or less in height	A single family house	15 feet
A parking lot	Any type of building	15 feet
A building between 31 and 40 feet in height	A single family house	30 feet
A building between 31 and 40 feet in height	A building between 31 and 40 feet in height	15 feet

	Required	Provided	Compliance
Side (north)	*North – Adjacent to multiple family residential* At least 15-feet. The proposed office building is 25-feet from the north property line, measured at its closest distance.	25-feet	Complies
Side (South)	The proposed office building is approximately 25 ft. from the south property line. The above table does not include a separation distance between the proposed development and an adjacent parking lot.	Over 25 feet	Complies
Rear (East)	The proposed office building is 14.66 ft. from the east property line, as shown on the site plan. As shown on the aerial image above, the subject property and the residences to the east share a rear property line. Therefore, there is more than 15 feet separation distance between the proposed office building and the adjacent dwelling.	Over 15 feet	Complies
Building Height	The maximum height of a building in the Greenfield District shall be 3 stories, but not more than 40 ft.	18 ft. 4 in., measured from grade to the top of the parapet.	Complies
Lot Coverage	The Greenfield District does not have a maximum percentage of	23.8%	Not Applicable

	lot coverage. The subject site is 19,950 sq. ft. (0.45 acres). The proposed 4,644 sq. ft. office building will occupy approximately 26.9% of the lot, leaving the remaining are to be occupied by impervious surface for parking and dumpster enclosure, and some green space for landscaping.		

Items to be addressed: *None*

PARKING

Section 138-219 of the Zoning Ordinance requires:

	Required	Provided
Office, medical: One per 100 square feet of usable floor area or ten, whichever is greater	1,340 usable square feet / 100 = 13.4	19
Business and professional offices of architects, engineers, landscape architects, lawyers or similar allied professions: One per 225 square feet of usable floor area	1,340 usable square feet / 250 = 5.4	
Barrier Free	2	2
Bicycle Parking	2	2
Loading	0	0
Total	**19 spaces**	**22 spaces plus 2 bike spaces**

Items to be Addressed: *None*

SITE ACCESS AND CIRCULATION

Sec. 138-398. - Building design requirements.

a) All development in the Greenfield district (except single family detached houses) shall front and have primary access from Greenfield.

CWA Comment: The development fronts Greenfield with primary access from Greenfield

b) Developments that face Ellwood shall be residential in character.

CWA Comment: Not Applicable

c) The planning commission may require screening including masonry walls up to 6 feet in height, decorative fencing or landscaping.

CWA Comment: The applicant is proposing a 5-foot 8-inch split face block screen wall along the eastern property line (adjacent to single-family residential). The applicant proposes landscaping along the northern property line. There is no proposed screening to the south.

d) The first floor elevation of a building that fronts a street shall be composed of a minimum of 30 percent and a maximum of 80 percent windows. When there is a choice between a major thoroughfare and a minor street, the elevation that faces the major thoroughfare shall be considered the front.

CWA Comment: It appears that the front elevation meets the 30 to 80% transparency requirement; however applicant should confirm.

e) The building elevation that fronts a street shall contain an entrance. The entrance shall access the first floor of the building. When there is a choice between a major thoroughfare and a minor street, the elevation that faces the major thoroughfare shall be considered the front.

CWA Comment: The development fronts Greenfield with all entrances fronting on Greenfield.

f) The planning commission may revise these requirements, if the commission finds that the standards for site plan approval, as outlined in section 138-678, have been met.

CWA Comment: It does not appear that the Planning Commission needs to revise the requirements.

Items to be Addressed: *Confirm transparency*

LANDSCAPING AND SCREENING

A landscaping plan has been provided on sheet C-1. The applicant proposes a mix of native grasses and a blue spruce at the northwest corner of the site. The northern property line includes a mix of four (4) blue spruce and four (4) columnar oaks. As set forth in section 130-37, when

the development of any property requiring site plan approval occurs, the City Planning Commission shall review landscaping plans and may require trees to be planted on or near the site consistent with the elements of the adopted city master plan.

The applicant should consider additional landscaping.

Trash Enclosure:

The applicant is proposing one (1) trash enclosure, to be screened with a masonry wall.

***Items to be Addressed**: Applicant considers additional landscaping and Planning Commission to review the landscape plan.*

PHOTOMETRICS

A photometric plan has been provided. The applicant is proposing seven (7) building lights fronting on Greenfield and six (6) building lights on the rear of the building. While screened down, the rear lights appear bright and may impact the adjacent residential homes.

***Items to be Addressed:** None*

EXTERIOR APPLIANCES

Applicant shall show exterior appliances (air conditioners, generators, etc.) on site plan to ensure compliance with Sec. 138-73.

***Items to be Addressed:** Applicant shall show exterior appliances (air conditioners, generators, etc.) on site plan to ensure compliance with Sec. 138-73.*

FLOOR PLAN AND ELEVATIONS

Floor plans and elevations have been provided. Materials include hardi plank lap siding, face brick, and red metal awning. The applicant notes the use of stone veneer. The stone in the detail doesn't match the stone shown on the elevation.

***Items to be Addressed:** Indicate location of stone veneer.*

DESIGN STANDARDS AND SITE PLAN REVIEW STANDARDS

As set forth in Sec. 138-679. – Standards, the site plan shall be reviewed and approved by the Planning Commission upon finding that:

1. The site meets the requirements of this Code.

2. The proposed development does not create adverse effects on public utilities, roads, or sidewalks.
3. Pedestrian and vehicular areas are designed for safety, convenience, and compliment adjacent site design.
4. Site design, architecture, signs, orientation, and materials are consistent with the city's master plan objectives and the design of the neighboring sites and buildings.
5. Landscaping, lighting, dumpster enclosures, and other site amenities are provided where appropriate and in a complementary fashion.
6. Site engineering has been provided to ensure that existing utilities will not be adversely affected.

Items to be Addressed: *Applicant addresses items noted in report.*

RECOMMENDATION

We recommend Planning Commission approval with the following conditions:

1. *Confirm transparency.*
2. *Applicant considers additional landscaping.*
3. *Indicate location stone veneer.*
4. *Applicant shall show exterior appliances (air conditioners, generators, etc.) on site plan to ensure compliance with Sec. 138-73.*

Sincerely,

Benjamin R. Carlisle

CARLISLE/WORTMAN ASSOC., INC.
Benjamin R. Carlisle, LEED AP, AICP

HUBBELL, ROTH & CLARK, INC
CONSULTING ENGINEERS SINCE 1915

MAILING: PO Box 824
Bloomfield Hills, MI 48303-0824
SHIPPING: 555 Hulet Drive
Bloomfield Hills, MI 48302-0360
PHONE: 248-454-6300
WEBSITE: hrcengr.com

February 8, 2022

City of Berkley
3338 Coolidge Highway
Berkley, Michigan 48072

Attention: Mr. Matthew Baumgarten, City Manager
Ms. Kim Anderson, Building Clerk

Re: Proposed Medical Office Building
2400 Greenfield Road
Engineering Site Plan – Review No. 3
City of Berkley, MI

HRC Job No. 20210848.02

Dear Mr. Baumgarten and Ms. Anderson:

As Consulting Engineers for the City of Berkley, and in accordance with your request, we have completed the Engineering Site Plan review of the proposed subject development for compliance with the City of Berkley's engineering and site plan requirements. The plans were prepared by T. Fought & Associates, Inc., with the engineering site plan created by Orman Engineering of Waterford, Michigan. The plans have a revision date of January 21, 2022 and were received by this office on January 26, 2022 via email. The proposed project scope includes the construction of a multi-unit medical office building and parking lot to be constructed across three (3) existing vacant lots. The site is located on the Greenfield Rd between Oxford and Catalpa. We hereby offer the following comments:

General:

1. The proposed compact car spaces must have signage clearly stating them as such. These signs must be included in the plans. ***Signage stating compact car spots as such have been added to the plans. This item has been satisfactorily addressed.***

2. A Road Commission for Oakland County (RCOC) permit will be required for proposed work within the Greenfield Road right-of-way as well as for construction signage. ***This item is still applicable. Any permits required must be obtained and submitted to the City prior to construction.***

3. A soil erosion permit will likely be required from the Oakland County Water Resources Commissioner (OCWRC). If a soil erosion permit is required, it must be obtained, and a copy of the approved permit provided to the City prior to commencing construction. Regardless of whether a permit is required, the City will require silt fence to be installed around the perimeter of the site, filter fabric installed in nearby catch basins, and a temporary maintenance aggregate/mud mat constructed for access to and from the proposed site. ***This item is still applicable. Any permits required must be obtained and submitted to the City prior to construction.***

4. A sequence of construction including estimated lane closure durations must be added to the plans. *This item is still applicable, a sequence of construction has not been added to the plans.* **A sequence of construction has been added to the plans. This item has been satisfactorily addressed.**

5. **A traffic control plan must be added to the plans.**

6. A geotechnical investigation must be performed in order to evaluate the proposed storm detention system. The soil logs from that investigation must be shown on the plans, including the elevation of the groundwater table, soil types encountered, and the written report indicating the design recommendations or comments on the proposed stormwater collection system. ***This item is still applicable, a geotechnical investigation must be performed and the report submitted to the City.***

7. For the purposes of clarity, it is recommended that the Demolition Plan and proposed Engineering/Site Plan be shown on two (2) separate plan sheets. Further, both the Demolition and Engineering/Site Plan sheets must show all removal and proposed quantities including pavement, curb, sidewalk/ramp, utilities, trees, and landscape features. ***The existing and proposed site plans have been shown on separate sheets. This item has been satisfactorily addressed.***

8. The City may require additional sections of existing curb and gutter and sidewalks along Greenfield Road to be removed and replaced as part of the proposed project in order to address the current deteriorated conditions and will defer comment to the City.

Water and Fire Protection Services:

1. Permits may be required from the Department of Environment, Great Lakes, and Energy (EGLE) and from OCWRC for the installation and connection of the new water main service. ***This item is still applicable. Any permits required must be obtained and submitted to the City prior to construction.***

2. The plans must include calculations for the new Residential Equivalent Unit (REU) value of the proposed (building) structures. These calculations must also support that the proposed water service is sufficiently sized for the new REU values. ***The REU value for the proposed building has been shown on the plans, and the water service lead appears to be adequately sized. This item has been satisfactorily addressed.***

3. The plans indicate a proposed water main connection to the existing water main in the Greenfield Road right-of-way (ROW). The City's Department of Public Works (DPW) requires a tapping sleeve, valve, and well be used for this connection. The plans must reflect this type of connection. Proposed finished grades for gate wells must be provided as well. *This item is still applicable. A valve and well must be shown and labeled on the plans, and must be added to the included structure schedule as well. In addition, a note calling for a tapping sleeve as a means of connection must be added to the plans.* **The notes regarding the live tap and connection details have been added to the plans. This item has been satisfactorily addressed.**

4. Where the water service connection is proposed the existing pavement cross-sections will need to be sawcut, removed, and replaced in kind. The plans must indicate the pipe bedding and type of backfill to be used in the street excavation areas for the new pipe installation. Further, the pavement restoration will be as per RCOC and as previously mentioned, an RCOC permit will be required. *This item is still applicable. A note stating that any removed pavement shall be replaced in kind as well as details that indicate the bedding and backfill must be added to the plans.* **Notes stating to replace pavement in kind have been added to the plans. The RCOC permit must be obtained and submitted prior to construction.**

Storm Drainage and Detention/Sanitary Sewer:

1. The type of cover to be utilized on the proposed drainage structures must be indicated on the plans. Restricted covers may need to be utilized if required by the City's DPW being that the City's sewer system is combined. The Applicant must inquire directly with the DPW. Efforts must be made to avoid overtaxing the system with additional drainage from the development. ***The cover types have been shown on the structure schedule. This item has been satisfactorily addressed.***

2. Details of the outlet control structure and the connection to the existing combined system must be shown on the plans. ***Details for the outlet control structure have been added to the plans. This item has been satisfactorily addressed.***

3. The plans indicate detention calculations for a 100-year storm for the proposed development. The provided volume calculations show a 48" HDPE pipe length of 364 feet. Dimensions and/or additional details of the underground pipe system must be added to the plans. In addition, the proposed storm sewer layout, including diameter and length, must be clearly indicated on the site plans. *Dimensions and/or details showing the lengths of the underground detention system piping must be added to the plans to verify that the calculations are correct.* **The layout and dimensions of the underground pipes have been shown on the plans and the calculations demonstrate that the system is designed to provide adequate storage. This item has been satisfactorily addressed.**

4. The developer will be required to complete a perpetuity maintenance agreement with the City for the proposed private stormwater systems. The Applicant must contact the City DPW regarding this item prior to commencing construction. ***The maintenance agreement has been submitted with the revised plans. The agreement will ultimately need to be reviewed and approved by the City and their attorney.***

5. Detail sheets for the proposed storm sewers must be provided with structures, covers, pipe requirements/cross sections and connection/tap details in accordance with City and County Standards. In addition, shop drawings for the said appurtenances will be required to be reviewed by the City and HRC. *This item is still applicable. Storm sewer Details must be added to the plans.* **Storm sewer details have been shown on the plans. This item has been satisfactorily addressed.**

6. Inverts of the proposed storm sewer (utility profile) must be added to the plans to confirm positive drainage through the site to the detention system and to the combined sewer connection. ***Inverts and a profile of the proposed storm system have been added to the plans. This item has been satisfactorily addressed.***

7. The proposed sanitary lead diameter and material is not indicated. The diameter of the sanitary lead as well as calculations showing that this size is adequate for the proposed development must be shown on the plans. ***The size and material of the sanitary lead has been called out on the plans. This item has been satisfactorily addressed.***

8. The proposed sanitary lead must include a new connection (TwisTee sewer saddle, as per the City DPW, or approved equal). *The plans do not mention the type of sanitary lead connection. This note must be added to the plans.* **A note regarding the type of connection has been added to the plans. This item has been satisfactorily addressed.**

Recommendation:

Based on our aforementioned comments, we recommend approval of the proposed Site Plan, subject to the applicant obtaining and submitting copies of the geotechnical report which confirms the feasibility of the underground storm system for the site soils as well as any necessary permits.

If you have any questions or require any additional information, please contact the undersigned.

Very truly yours,

HUBBELL, ROTH & CLARK, INC.

Edward D. Zmich
Project Manager

Mitch Stark
Review Engineer

EDZ/MAS/mas
pc: City of Berkley; Mr. Derrick Schueller, Mr. Shawn Young
Carlisle Wortman & Associates; Ben Carlisle, Megan Masson-Minock
Orman Engineering; Alexander Orman
T. Fought & Associates; Timothy Fought
HRC; R. Alix, File

Dept. of Public Works

Memo

To: Megan Masson-Minock, Interim Community Development Director (via email)

Cc: Kim Anderson, Community Development (via email)
Shawn Young, DPW Foreman (via email)
Eddie Zmich, HRC (via email)

From: Derrick Schueller, DPW Director

Date: February 7, 2022

Subject: Proposed Medical Office Building
Plan Review #3
2400 Greenfield

We have reviewed the revised plans provided by the Community Development Department on January 26 and prepared by T. Fought & Associates and Orman Engineering.

The drawings are in substantial compliance with the previous DPW comments. The following items shall be provided to the City prior to scheduling a preconstruction meeting:

1. A plan approval letter from the City's engineering consultant, Hubbell, Roth & Clark (HRC).

2. Greenfield Road is under the jurisdiction of RCOC. Per the Oakland County review letter dated September 17, 2021, an encroachment letter must be obtained from the adjacent property owner or the proposed drive approach relocated. In addition, an RCOC permit must be provided to the City.

3. A stormwater maintenance agreement shall be signed and finalized. An agreement template, as approved by the City Attorney, was previously provided to the applicant and shall be merged with the Exhibits.

4. A traffic control plan and sequence of construction shall be submitted to cover the ROW activities.

5. A construction schedule shall be provided with dates and durations of all major work items, including final restoration.

6. Proof of insurance is required with the City and HRC noted as additionally insured. Policy documents shall not include the language "…..as required by written contract…..".

7. Bonding and any escrow requirements will be noted later under separate cover.

8. Please note electronic as-built drawings and a PE signed and sealed certification letter indicating the underground detention system was constructed in accordance with the approved plans will be required following the utility installations.

Feel free to call with any questions or concerns. Thank you.

THE CITY OF BERKLEY
Building Department
3338 Coolidge, Berkley, Michigan 48072
(248) 658-3320

NOTICE OF PUBLIC MEETING
BERKLEY PLANNING COMMISSION

NOTICE IS HEREBY GIVEN, in accordance with Section 138-399 of the Berkley City Code, that there will be a meeting of the Berkley Planning Commission to be held at the City of Berkley in the Council Chambers, 3338 Coolidge Hwy, Berkley Michigan, on **Tuesday, February 22, 2022** at 7:05pm, or as near thereto as the matter may be reached.

APPLICATION PSP-02-21

T. Fought & Associates, on behalf of 2400 Trust, 2400 Greenfield Rd, Parcel #25-18-301-031, is requesting site plan approval for the development of a new six-unit office building in the Greenfield District.

Complete application information is available for review at www.berkleymich.org/urbanplanning.

Comments regarding the request may be made in person on the night of the meeting or may be made in writing. All written comments must be submitted to the Building Department or email to comdirector@berkleymich.net before 5:00p.m on the date of the Planning Commission meeting.

You can watch the meeting: https://www.berkleymich.org/livestream/index.php

MEGAN MASSON-MINOCK
INTERIM COMMUNITY DEVELOPMENT DIRECTOR

Nancy & Bruce Gilbert 3551 Ellwood Berkley, MI 48072	Margaret Kuhlmann 2539 Ellwood Berkley, MI 48072	2400 Trust 1359 Davis Dr Birmingham, MI 48009
James & Patricia Fleck 2519 Ellwood Berkley, MI 48072	Charles Pickett 2481 Ellwood Berkley, MI 48072	Suanne Zager 2463 Ellwood Berkley, MI 48072
Carolyn Johnson 2445 Ellwood Berkley, MI 48072	Raquel M Freed-Watson 2427 Ellwood Berkley, MI 48072	Laura & Colby Maiorana 2409 Ellwood Berkley, MI 48072
Jourdan Bradshaw & Kevin Gard 2399 Ellwood Berkley, MI 48072	Karen Kohute 2391 Ellwood Berkley, MI 48072	Thomas Hayward 2375 Ellwood Berkley, MI 48072
Lillian D Cragg 2359 Ellwood Berkley, MI 48072	Alex Zajac & Meghan Rohen 2520 Ellwood Berkley, MI 48072	Nicole Berlin 2482 Ellwood Berkley, MI 48072
Christina & Larry Tallma 2464 Ellwood Berkley, MI 48072	Mark Wolf 2446 Ellwood Berkley, MI 48072	Ryan Treece & Kelsey Vargas 2428 Ellwood Berkley, MI 48072
Jeanine Jabouri 2410 Ellwood Berkley, MI 48072	Lauren Baywol 2400 Ellwood Berkley, MI 48072	Jonathan & Kelly Pyszel 2392 Ellwood Berkley, MI 48072
Donna Meldrum 2376 Ellwood Berkley, MI 48072	Michael Blake 25103 Scotia Rd Huntington Woods, MI 48070	Occupant 2360 Ellwood Berkley, MI 48072
Margaret Pringle 2344 Ellwood Berkley, MI 48072	Tamra Zakar 3212 Ellwood Berkley, MI 48072	Tuomo Tapio & Katherine Kallio 2279 Ellwood Berkley, MI 48072
2280 Ellwood LLC 3581 Cumberland Berkley, MI 48072	Marc Beauregard 2280 Ellwood Berkley, MI 48072	Anthony Johnston 2520 Greenfield Berkley, MI 48072

Leonard & Rebecca Cole 2540 Greenfield Berkley, MI 48072	Anthony De Camp 2550 Greenfield Berkley, MI 48072	Francine Solomon 2482 Greenfield Berkley, MI 48072
Sandra Dains 2464 Greenfield Berkley, MI 480702	Gerald Kokenos 3279 Prairie Royal Oak, MI 48073	Occupant 2446 Greenfield Berkley, MI 48072
Stach Group LLC 15900 W Ten Mile #300 Southfield, MI 48075	Janier Smith 2428 Greenfield Berkley, MI 48072	Greenfield Presbyterian Church 2312 Greenfield Berkley, MI 48072
Oakland County Parks 2800 Watkins Lake Rd Bldg 97W Waterford MI 48328	West Bloomfield Property LLC PO Box 598 Birmingham, MI 48012	Dorothy’s Montessori 27467 Greenfield Berkley, MI 48072
Oakland County 1200 N Telegraph Rd Pontiac, MI 48341		



Proposed:
OFFICE BUILDING

3462-3478 Greenfield Rd.
Berkley, MI 48702

Owners:
GREEN TRUST
1359 Davis Ave.
Birmingham, MI 48009

Architect:
T. FOUGHT & ASSOCIATES LLC
24045 Woodland Dr.
Southfield, MI 48076
P: (248)514-7612

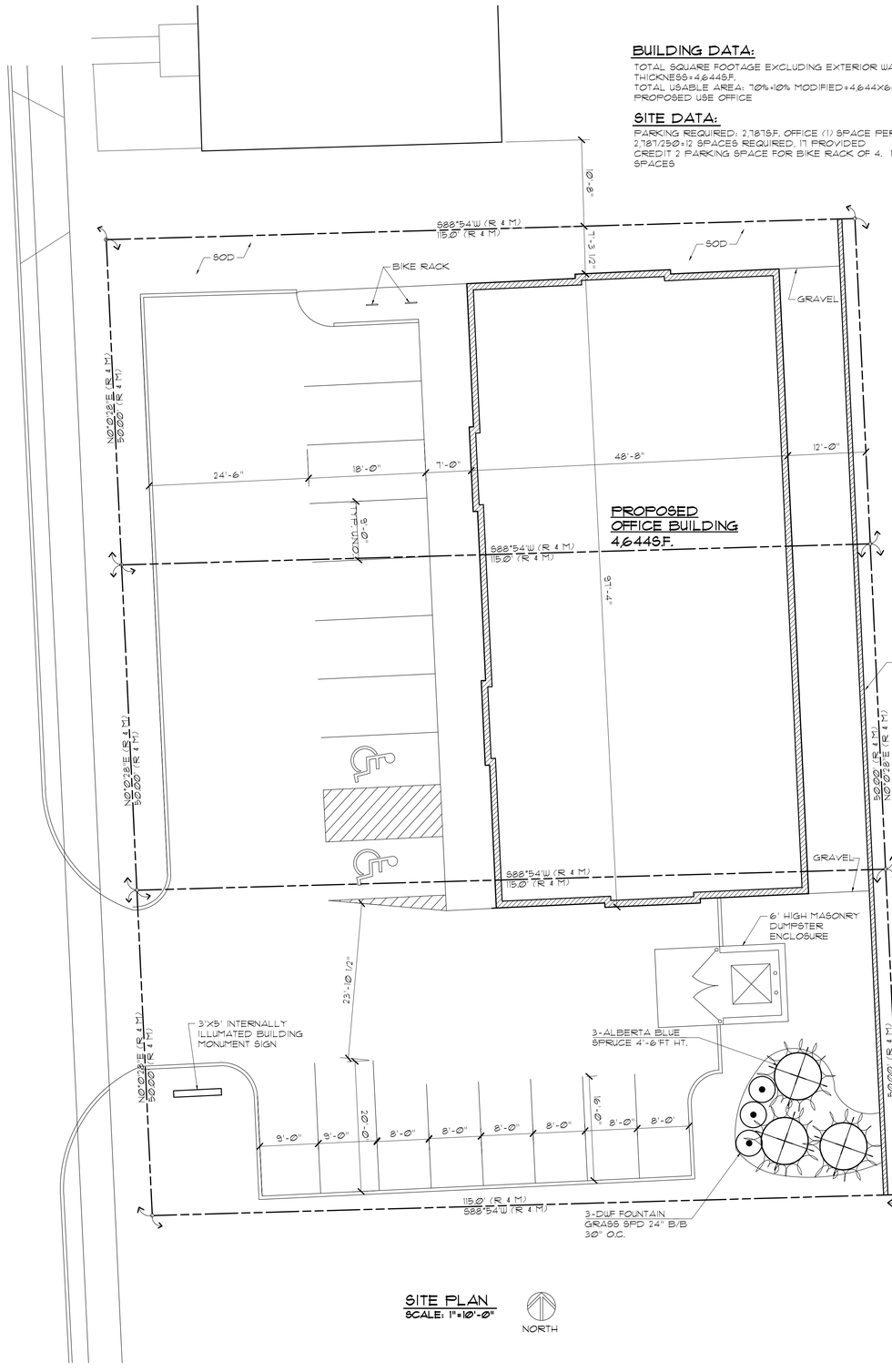
Project No. T2021014

CODE INFORMATION:
BUILDING CODES:
- 2015 MICHIGAN BUILDING CODE -ICC/ANSI A117.1-2009
- 2015 MICHIGAN PLUMBING CODE
- 2015 MICHIGAN MECHANICAL CODE
- 2017 NATIONAL ELECTRICAL CODE (W/ MICHIGAN AMENDMENTS)
- 2015 MICHIGAN UNIFORM ENERGY CODE PART 10A ANSI/ASHRAE/IESNA STANDARD 90.1
- 2012 INTERNATIONAL FIRE CODE W/ AMENDMENTS

SCOPE OF WORK
THIS PROJECT INVOLVES NEW BUILD FOR OFFICE BUILDING.

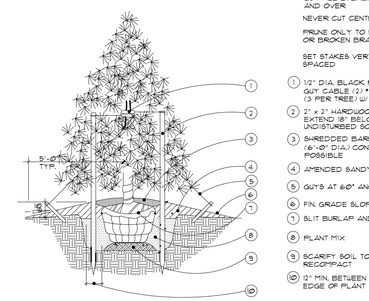
SHEET INDEX

C-1	TITLE SHEET, LOCATION, SITE, & LANDSCAPE PLANS
1	SURVEY DRAWING
SP-1	DEMOLITION PLAN
SP-2	DIMENSIONAL PLAN
SP-3	PAVING & GRADING PLAN
SP-4	UTILITIES PLAN
SP-5	SOIL EROSION & SEDIMENTATION CONTROL PLAN
SP-6	SITE DETAILS & DETENTION CALCULATIONS
SP-7	K&I DETAILS
1 OF 1	STORM DRAIN NOTES AND DETAILS
1	SITE SURVEY
A.1	FLOOR PLAN & ELEVATIONS
A.2	COLORED ELEVATIONS & MATERIAL BOARD
E.1	PHOTO METRIC PLAN



SITE PLAN
SCALE: 1"=10'-0"

NORTH



NOTES:
STAKE ALL EVERGREEN TREES UNDER 12' HIGH

GUY ALL EVERGREEN TREES 12' HIGH AND OVER

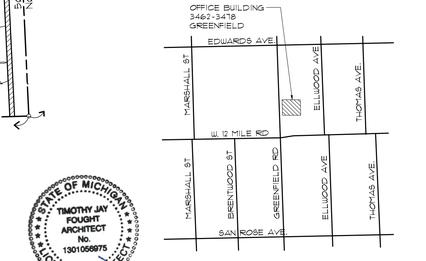
NEVER CUT CENTRAL LEADER

PRUNE ONLY TO REMOVE DEAD OR BROKEN BRANCHES

SET STAKES VERTICAL AND EVENLY SPACED

1. 1/2" DIA. BLACK RUBBER HOSE W/ GUY CABLE (2) # 12 GALV. WIRE (3 PER TREE) W/ GALV. TURNBUCKLE
2. 2" x 2" HARDWOOD STAKES TO EXTEND 18" BELOW TREE PIT IN UNDISTURBED SOIL
3. SHREDDED BARK MULCH 3" DEPTH (6'-0" DIA.) CONNECT BEDS WHERE POSSIBLE
4. AMENDED SANDY LOAM TOPSOIL
5. GUYS AT 60° ANGLE
6. FIN. GRADE SLOPED AWAY FROM TREE
7. SLIT BURLAP AND LEAVE TIED
8. PLANT MIX
9. SCARIFY SOIL TO 4" DEPTH AND RECOMPACT
10. 12" MIN. BETWEEN ROOTBALL AND EDGE OF PLANT PIT

EVERGREEN TREE DETAIL
NTS



LOCATION PLAN
SCALE: NONE

NORTH

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THIS DOCUMENT AND SUBJECT MATTER CONTAINED HEREIN IS PROPRIETARY AND IS NOT TO BE USED OR REPRODUCED WITHOUT THE WRITTEN PERMISSION OF T. FOUGHT & ASSOCIATES LLC

PROJECT
SPEC OFFICE SPACE
3462 3478 GREENFIELD RD
BERKLEY, MI

SUBJECT
SITE PLAN

ARCHITECTS
T. FOUGHT & ASSOCIATES LLC
24045 WOODLAND DR, SOUTHFIELD, MI 48034
(248) 514-7612

ISSUED:
SITE PLAN APPROVAL
09/24/2021
01/21/2021

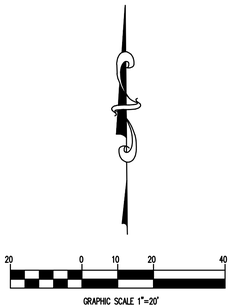
DRAWN	T.J.F.
CHECKED	T.J.F.
APPROVED	T.J.F.
BIDS	
CONSTR.	

DO NOT SCALE PRINTS - USE FIGURED DIMENSIONS ONLY

JOB NO.
T2021024

SHEET
C.1

34 GREENFIELD OFFICE



LEGEND

	AMERITECH		SIGNAL POLE
	WATER SHUT OFF		PUBLIC LIGHTING MH.
T	TELEPHONE RISER	E	ELECTRIC RISER OR METER
TH	TELEPHONE		CATHODIC PROTECTION
C.O.	SEWER CLEAN OUT		GUY WIRE
G	GAS METER		HIGH TENSION TOWER
GV	GAS VALVE /GAS MARKER		FLAG POLE
	MANHOLE (M.H.)		BOLLARD
	CATCH BASIN (C.B.)		STEEL COLUMN
	GATE VALVE IN WELL (G.V.W)		MAILBOX
	FIRE HYDRANT		SIGN
	STORM MANHOLE (ST. MH)	TRANS	ELECTRIC TRANSFORMER
	FENCE POST	EX.	EXISTING
	UTILITY POLE	PROP.	PROPOSED
	UTILITY POLE W/ LAMP EXTENSION		WATER FLOW INDICATOR

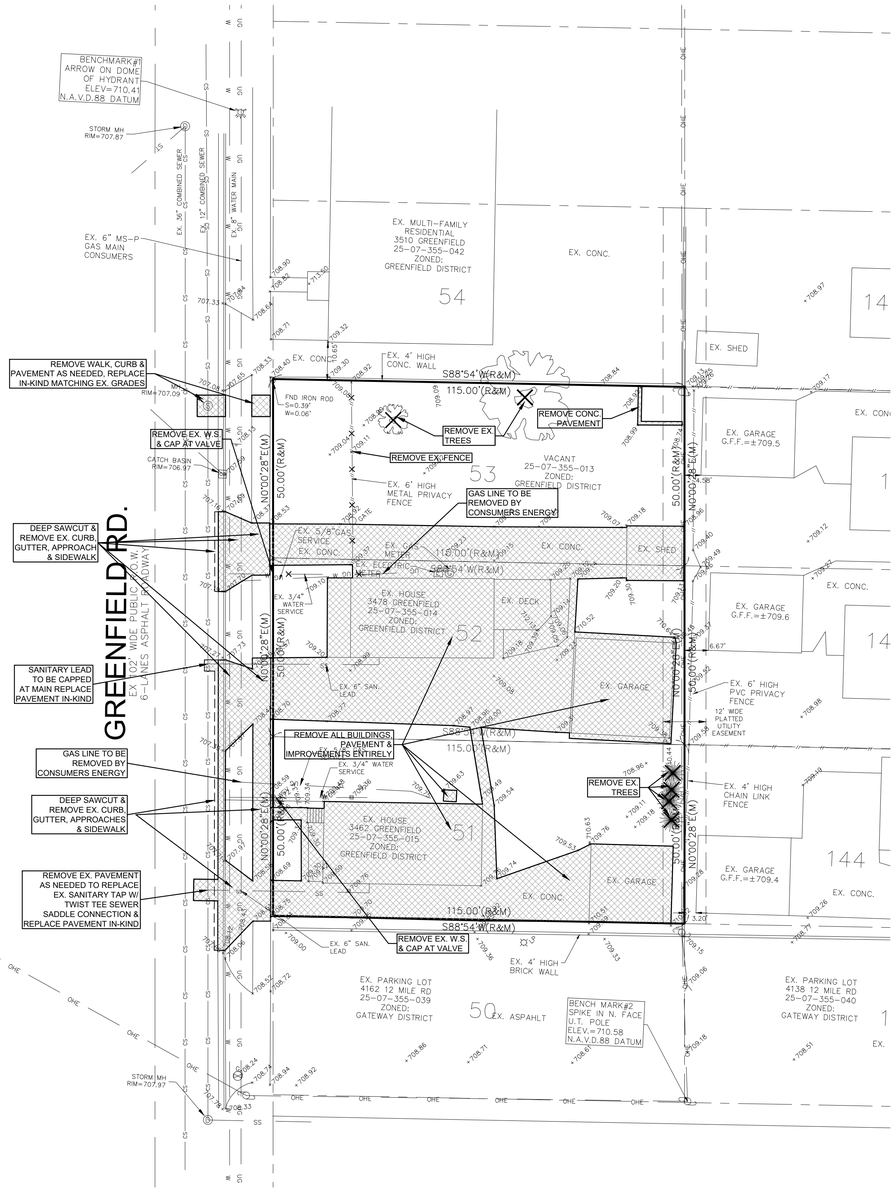
UTILITIES LEGEND

G G	GAS
SS SS	SANITARY (SAND
CS CS	COMBINDED (CS)
ST ST	STORM (STM)
W W	WATERMAIN (WM)
OH OH	OVERHEAD WIRE
UC UC	UNDERGROUND CABLE
	EX. DITCH
	SVALE CENTERLINE
	EASEMENTS
	CHAIN LINK FENCE

DEMOLITION LEGEND

PROPOSED REMOVAL

PROPOSED ITEM REMOVAL



NOTE: THE EXISTING SANITARY SEWER CONNECTIONS TO BE ABANDONNED SHALL USE A SPOT LINER OR OTHER D.P.W. APPROVED METHOD.

MISS DIG TICKET #: B12561363



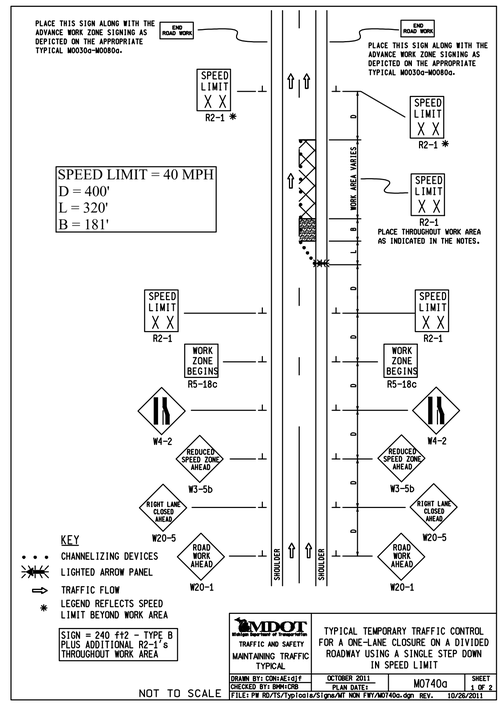
LOCATION MAP
N.T.S.

LEGAL DESCRIPTION:
PROPERTY LOCATED IN THE CITY OF BERKLEY, COUNTY OF OAKLAND, STATE OF MICHIGAN:

3462 GREENFIELD RD
Tax ID# 25-07-255-015
T1N, R11E, SEC 7 ELLWOOD HEIGHTS LOT 51

3478 GREENFIELD RD
Tax ID# 25-07-255-014
T1N, R11E, SEC 7 ELLWOOD HEIGHTS LOT 52

3478 GREENFIELD RD
Tax ID# 25-07-255-013
T1N, R11E, SEC 7 ELLWOOD HEIGHTS LOT 53



37

NOTE: A SEQUENCE OF CONSTRUCTION INCLUDING ESTIMATED LANE CLOSURE DURATION WILL BE PROVIDED BY THE CONTRACTOR FOR APPROVAL PRIOR TO CONSTRUCTION

Engineering

Orman Engineering, LLC
5476 Vivian Lane
Waterford, MI 48327
phone: 248.682.6001
email: alex@ormanengineering.com

PROJECT
PROPOSED OFFICE BUILDING

CLIENT
North Green Trust
1359 Davis Ave.
Birmingham, MI 48009

Dan Winter
Cell: (313) 909-6800
Email:
primemangement@tir.com

SEAL

STATE OF MICHIGAN
ALEXANDER ORMAN
ENGINEER NO. 48878
LICENSED PROFESSIONAL ENGINEER

SHEET
DEMOLITION PLAN

PROJECT LOCATION
3462 - 3478 Greenfield Rd.
City of Berkley,
Oakland County, MI 48072

Know what's **below** **Call** before you dig.

REVISIONS

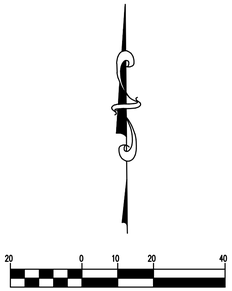
Date	Description
01-21-2022	REVISED PER CITY
12-01-2021	REVISED PER CITY
09-24-2021	SITE PLAN APPROVAL

Designed by:	Drawn by:
A.O.	S.D.M.

Approved by:	Date:
A.O.	08-20-2021

Scale:
1" = 20'

Job No.:	Sheet:
1326	SP-1



LEGEND

	AMERITECH		SIGNAL POLE
	WATER SHUT OFF		PUBLIC LIGHTING MH.
T	TELEPHONE RISER	E	ELECTRIC RISER OR METER
TH	TELEPHONE		CATHODIC PROTECTION
C.O.	SEWER CLEAN OUT		GUY WIRE
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	MANHOLE (M.H.)		BOLLARD
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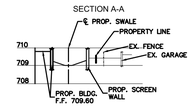
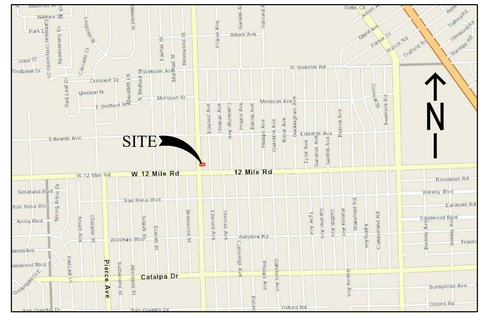
	GATE VALVE IN WELL (G.V.W)		MAILBOX
	FIRE HYDRANT		SIGN
	STORM MANHOLE (ST. MH)	TRANS	ELECTRIC TRANSFORMER
	FENCE POST	EX.	EXISTING
	UTILITY POLE	PROP.	PROPOSED
	UTILITY POLE W/ LAMP EXTENSION		WATER FLOW INDICATOR

UTILITIES LEGEND

EXISTING		PROPOSED
G G	GAS	
SS SS	SANITARY (SAN)	SAND BACKFILL
ST ST	STORM (STM)	
CS CS	CONBINED (CS)	CS CS
OHW OHW	WATER MAIN (WM)	
OH OH	OVERHEAD WIRE	
UC UC	UNDERGROUND CABLE	
	DITCH	
	SVALE CENTERLINE	
	EASEMENTS	
	CHAIN LINK FENCE	



SCALE: HORIZONTAL 1" = 20'
VERICAL 1" = 4'



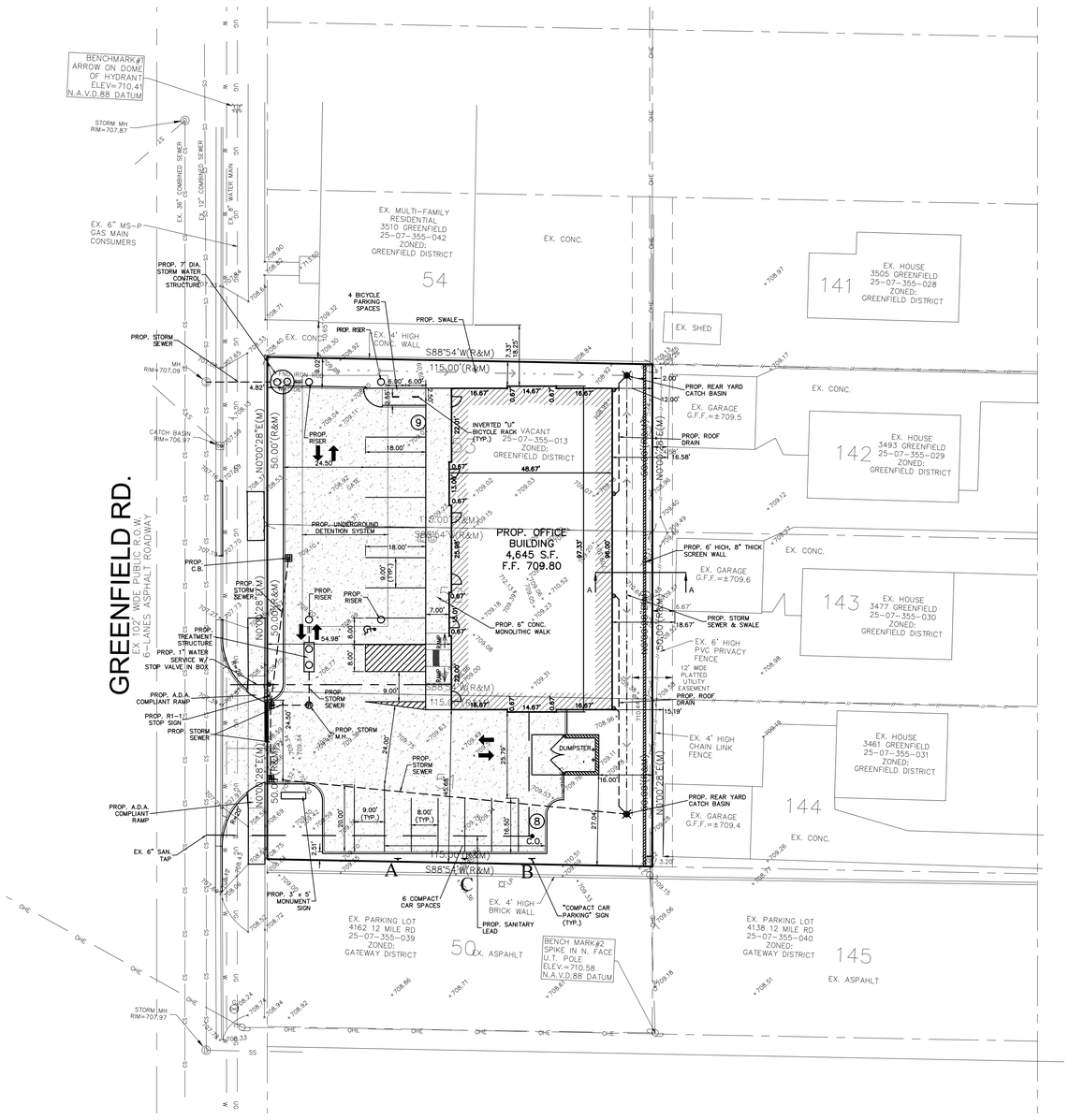
LOCATION MAP
N.T.S.

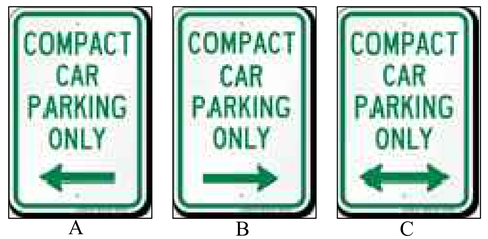
LEGAL DESCRIPTION:
PROPERTY LOCATED IN THE CITY OF BERKLEY, COUNTY OF OAKLAND, STATE OF MICHIGAN:

3462 GREENFIELD RD
Tax ID# 25-07-255-015
T1N, R11E, SEC 7 ELLWOOD HEIGHTS LOT 51

3478 GREENFIELD RD
Tax ID# 25-07-255-014
T1N, R11E, SEC 7 ELLWOOD HEIGHTS LOT 52

3478 GREENFIELD RD
Tax ID# 25-07-255-013
T1N, R11E, SEC 7 ELLWOOD HEIGHTS LOT 53





COMPACT CAR ONLY PARKING SIGNS
N.T.S.

OEngineering

Orman Engineering, LLC
5476 Vivian Lane
Waterford, MI 48327
phone: 248.682.6001
email: alex@ormanengineering.com

PROJECT
PROPOSED OFFICE BUILDING

CLIENT
North Green Trust
1359 Davis Ave.
Birmingham, MI 48009

Dan Winter
Cell: (313) 909-6800
Email:
primemangement@tir.com

SEAL

STATE OF MICHIGAN
ALEXANDER ORMAN
ENGINEER NO. 48878
LICENSED PROFESSIONAL ENGINEER

SHEET
DIMENSIONAL PLAN

PROJECT LOCATION
3462 - 3478 Greenfield Rd.
City of Berkley,
Oakland County, MI 48072

Know what's **below** **Call** before you dig.

REVISIONS

Date	Description
01-21-2022	REVISED PER CITY
12-01-2021	REVISED PER CITY
09-24-2021	SITE PLAN APPROVAL

Designed by:	Drawn by:
A.O.	S.D.M.

Approved by:	Date:
A.O.	08-20-2021

Scale:
1" = 20'

Job No.:	Sheet:
1326	SP-2

20 0 10 20 40

GRAPHIC SCALE 1"=20'

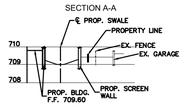
LEGEND

	AMERITECH		SIGNAL POLE
	WATER SHUT OFF		PUBLIC LIGHTING MH.
T	TELEPHONE RISER	E	ELECTRIC RISER OR METER
TH	TELEPHONE		CATHODIC PROTECTION
C.O.	SEWER CLEAN OUT		GUY WIRE
G	GAS METER		HIGH TENSION TOWER
GV	GAS VALVE /GAS MARKER		FLAG POLE
	MANHOLE (MH.)		BOLLARD
	CATCH BASIN (C.B.)		STEEL COLUMN
	GATE VALVE IN WELL (G.V.W)		MAILBOX
	FIRE HYDRANT		SIGN
	STORM MANHOLE (ST. MH)	TRANS	ELECTRIC TRANSFORMER
	FENCE POST	EX.	EXISTING
	UTILITY POLE	PROP.	PROPOSED
	UTILITY POLE W/ LAMP EXTENSION		WATER FLOW INDICATOR

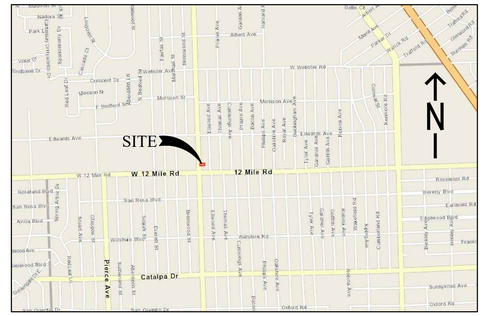
UTILITIES LEGEND

EXISTING		PROPOSED
G G	GAS	
SS SS	SANITARY (SAN)	SS SAND BACKFILL
ST ST	STORM (STM)	ST
CS CS	COMBINED (CS)	CS CS
W W	WATER MAIN (WM)	W
OH OH	OVERHEAD WIRE	
UC UC	UNDERGROUND CABLE	
	DITCH	
	SWALE CENTERLINE	
	EASEMENTS	
	CHAIN LINK FENCE	

SECTION A-A



SCALE: HORIZONTAL 1" = 20'
VERICAL 1" = 4'



LOCATION MAP
N.T.S.

R.C.O.C. NOTES

A SEPARATE PERRMIT IS REQUIRED FOR ALL UNDERGROUND UTILITIES WITHIN THE EXISTING R.O.W.

LANE CLOSURES RESTRCTED TO 9-3 MON. - FRI.

PROPER SIGNING IS REQUIRED BEFORE ANY WORK IN R.O.W. IS STARTED

FIXED OBJECTS TO BE MINIMUM 6 FEET OFF BACK OF CURB OR 12 FEET OFF EDGE OF PAVMENT

KEEP ROADS CLEAN OF DIRT AND DEBRIS

HAND DIG AROUND ALL UTILITIES

ADJUST / RECONSTRUCT EXISTING STRUCTURE AS WARRANTED

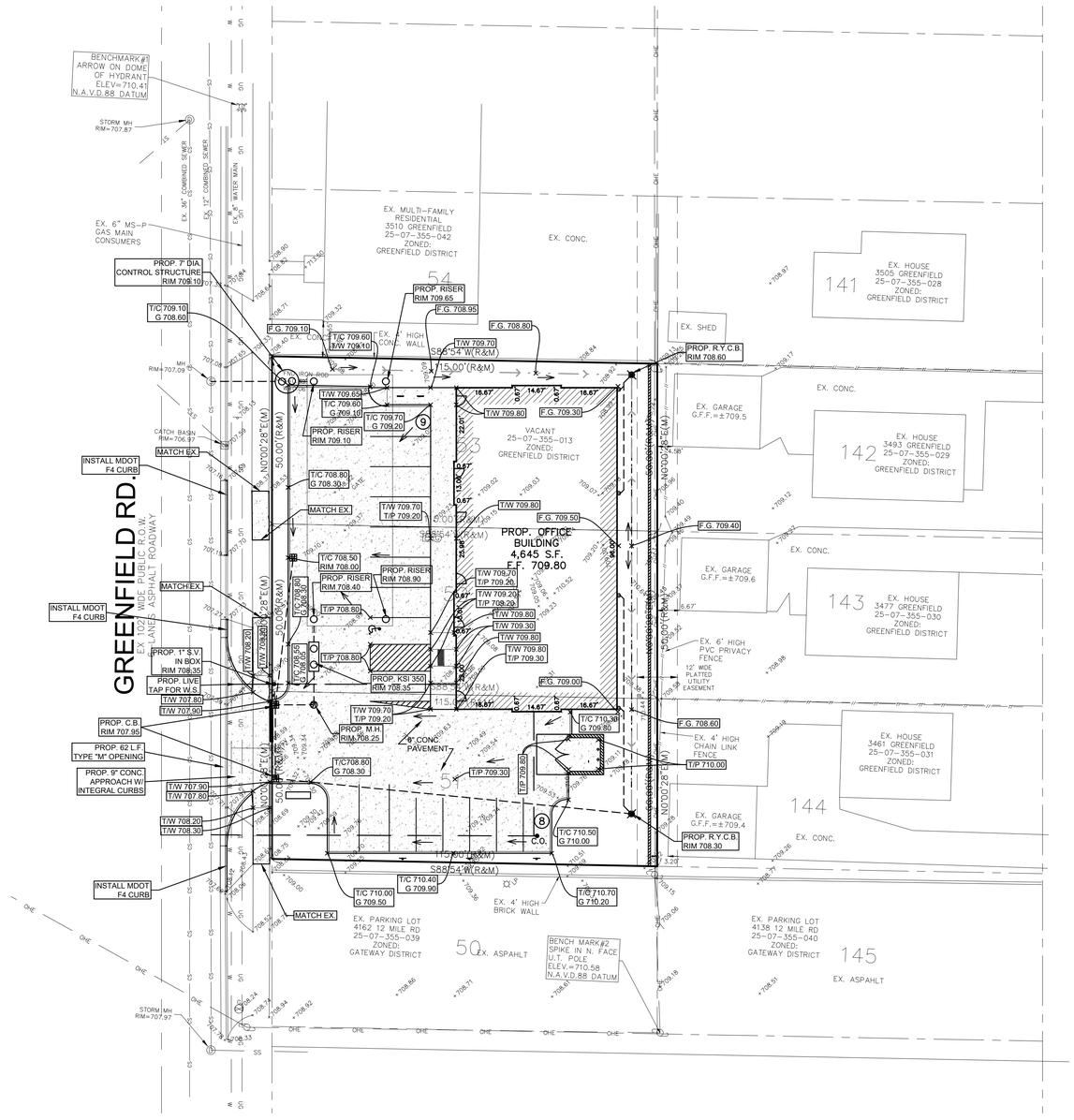
REMOVE OR RELOCATE FIXED OBJECTS PRIOR TO EXCAVATION

FULL DEPTH SAWCUT AND/OR MILL A BUTT JOINT WITH LOCATION/WIDTH AS DIRECTED BY RCOC INSPECTOR

MATCH AND TIE PROPOSED CURB TO EXITING CURB EPOXY COATED #4 BAR REQUIRED

ANY PEDESTRIAN FACILITIES SHALL BE CONSTRUCTED IN ACCORDANCE WITH CURRENT AMERICANS DISABILITIES ACT (A.D.A.) GUIDELINES

EXCAVATIONS WITHIN A 1:1 INFLUENCE OF THE R.O.W. WILL REQUIRED M.D.O.T. CLASS II BACKFILL COMPACTED TO 95% MAXIMUM DENSITY



Orman Engineering, LLC
5476 Vivian Lane
Waterford, MI 48327
phone: 248.682.6001
email: alex@ormanengineering.com

PROJECT

PROPOSED OFFICE BUILDING

CLIENT

North Green Trust
1359 Davis Ave.
Birmingham, MI 48009

Dan Winter
Cell: (313) 909-6800
Email:
primemangement@tir.com

SEAL

STATE OF MICHIGAN
ALEXANDER ORMAN
ENGINEER NO. 48878
LICENSED PROFESSIONAL ENGINEER

SHEET

PAVING & GRADING PLAN

PROJECT LOCATION

3462 - 3478 Greenfield Rd.
City of Berkley,
Oakland County, MI 48072

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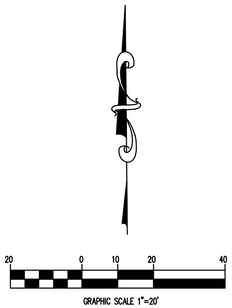
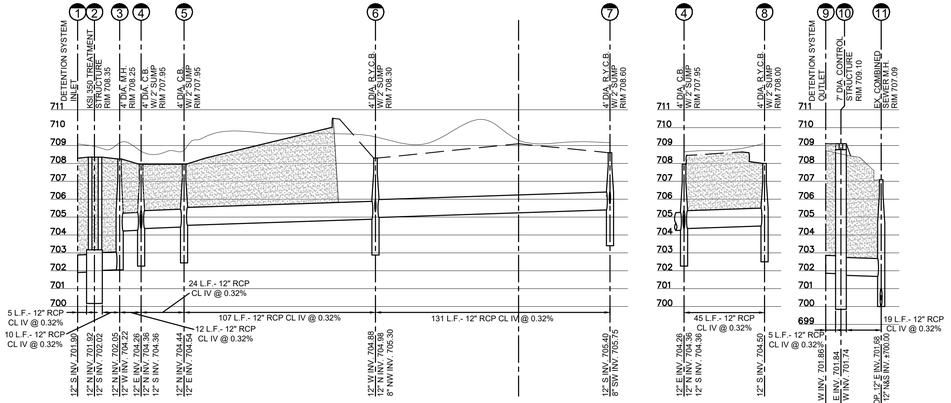
Designed by:	Drawn by:
A.O.	S.D.M.

Approved by:	Date:
A.O.	08-20-2021

Scale: 1" = 20'

Job No.:	Sheet:
1326	SP-3





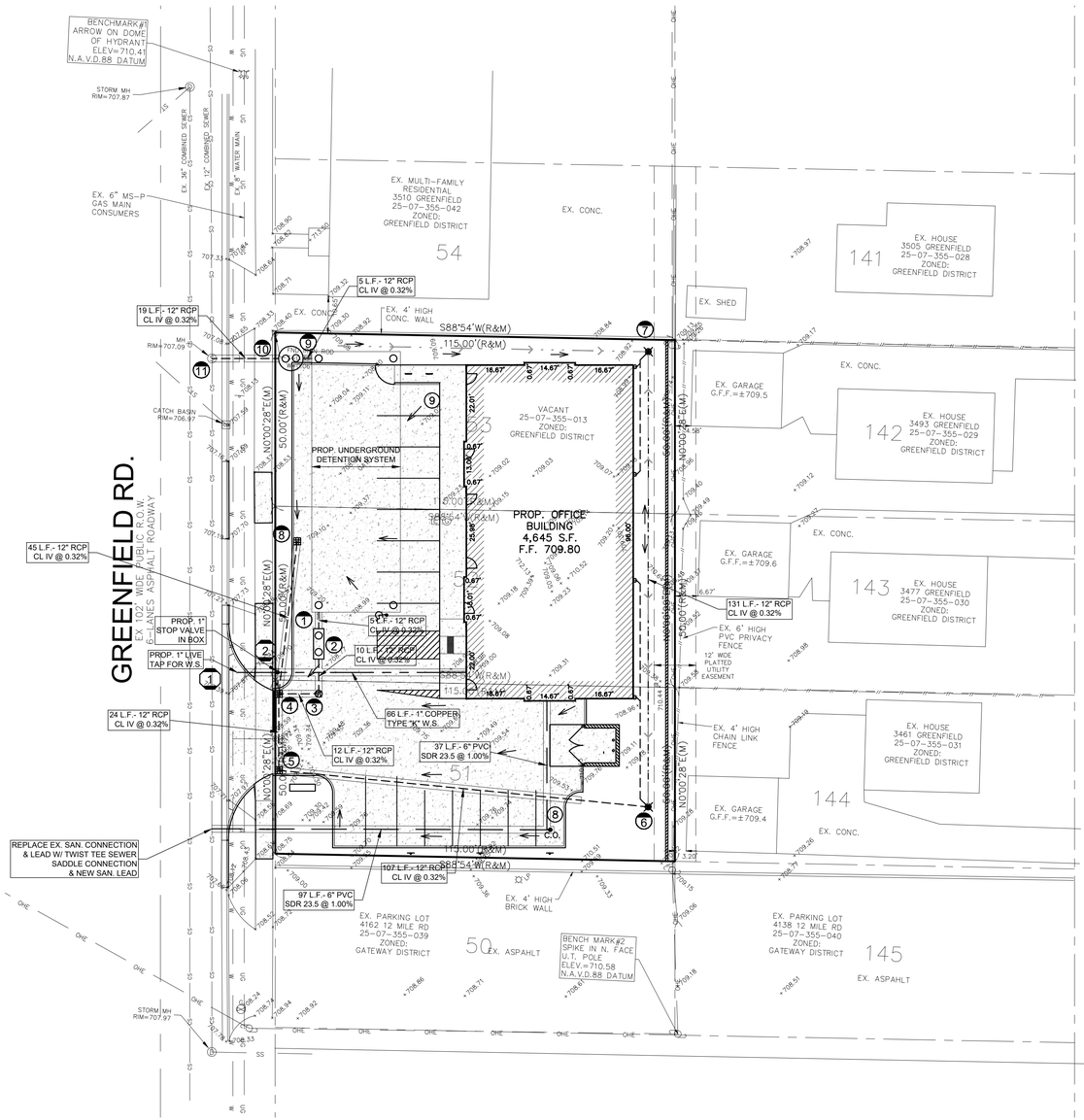
STORM SEWER PROFILES

SCALE: HORIZONTAL 1" = 40'
VERTICAL 1" = 4'

DENOTES MDOT CLASS II GRANULAR BACKFILL AT 95% COMPACTION



LOCATION MAP
N.T.S.



T=	20 Minutes	Time of Concentration	City of Berkley, Oakland County, Michigan	Project No:	1326
I =	175 /(T+25)	10 Year StormEvent Intensity	Storm Sewer Calculations	Project Name:	North Green Trust
n (Conc.)	0.013	Manning's Roughness Coefficient		Location:	3462-3478 Greenfield Road
n (Pvc)	0.009	Manning's Roughness Coefficient		Dated:	10/27/21
				Revise:	

From Manhole Number	To Manhole Number	Drainage Area (Acres)	Runoff Coefficient (C)	Equivalent Area (C * A)	Total Area (Sum C * A)	Time of Concentration (Minutes)	Rainfall Intensity (Inches/Hr.)	Actual Discharge (CFS)	Pipe Size (Inches)	Pipe Slope (% Slope)	Pipe Length (Feet)	Flow Full Velocity (Ft./Sec)	Time of Flow (Minutes)	Full Pipe Capacity (CFS)	H. G. Elev. Upper End (Feet)	H. G. Elev. Lower End (Feet)	H. G. Slope (% Slope)	Theoretical Velocity (Ft./Sec)	Ground Elevation (Upper)	Change in Elevation (Feet)	Invert Elev. Upper End (Feet)	Invert Elev. Lower End (Feet)
Building	7	0.05	0.95	0.05	0.05	20.00	3.89	0.18	8	1.00	5	3.46	0.02	1.21	705.80	705.80	0.023	0.529	709.80	0.05	705.80	705.75
7	6	0.04	0.55	0.02	0.07	20.02	3.89	0.27	12	0.32	131	2.57	0.85	2.02	705.40	705.39	0.006	0.344	708.60	0.42	705.40	704.98
Building	6	0.05	0.95	0.05	0.05	20.00	3.89	0.18	8	1.00	30	3.46	0.14	1.21	705.60	705.59	0.023	0.529	709.80	0.30	705.60	705.30
6	5	0.04	0.55	0.02	0.14	20.87	3.81	0.53	12	0.32	107	2.57	0.69	2.02	705.05	705.03	0.022	0.675	708.30	0.34	704.88	704.54
5	4	0.07	0.90	0.06	0.20	21.57	3.76	0.76	12	0.32	24	2.57	0.16	2.02	705.03	705.02	0.045	0.966	707.95	0.08	704.44	704.36
8	4	0.10	0.90	0.09	0.09	20.00	3.89	0.35	12	0.32	45	2.57	0.29	2.02	705.02	705.02	0.010	0.446	708.00	0.14	704.50	704.36
4	3	0.05	0.95	0.05	0.34	21.73	3.75	1.27	12	0.32	12	2.57	0.08	2.02	705.02	705.00	0.127	1.619	707.95	0.04	704.26	704.22
3	2	0.00	0.00	0.00	0.34	21.80	3.74	1.27	12	0.32	10	2.57	0.06	2.02	702.67	702.66	0.127	1.616	708.25	0.03	702.05	702.02
2	1	0.00	0.00	0.00	0.34	21.87	3.73	1.27	12	0.32	5	2.57	0.03	2.02	702.66	702.65	0.127	1.614	708.35	0.02	701.92	701.90
9	10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	12	0.32	5	2.57	0.03	2.02	702.50	702.50	0.000	0.000	709.10	0.02	701.86	701.84
10	11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	12	0.32	19	2.57	0.12	2.02	702.50	702.50	0.000	0.000	709.10	0.06	701.74	701.68

SANITARY SEWER BASIS OF DESIGN

COMMERCIAL SITE = 0.40 ACRES x 7 PEOPLE PER ACRE PER DAY
= 2.88 PEOPLE / DAY

ASSUME DESIGN CAPACITY = 100 G.P.D.
AVERAGE FLOW = (2.88 x 100) / (24 x 3600 x 7.5) = 0.0004 C.F.S.
PEAKING FACTOR = [18 + (2.88 / 1000)$^{0.5}$] / [4 + (2.88 / 1000)$^{0.5}$] = 4.45
PEAK FLOW = 0.0004 C.F.S. x 4.45 = 0.0018 C.F.S.

AVAILABLE CAPACITY FOR EX. 6" SEWER PIPE @ 1.00% = 0.19 C.F.S.

STRUCTURE SCHEDULE

STORM SEWER

1. DETENTION SYSTEM INLET
   12" S INV. 701.90
2. KSI 350 TREATMENT STRUCTURE
   RIM 708.35
   12" N INV. 701.92
   12" S INV. 702.02
3. 4' DIA. MAN HOLE
   EJIW # 1040 W/ TYPE "A" COVER
   RIM 708.25
   12" N INV. 702.05
   12" W INV. 704.22
4. 4' DIA. CATCH BASIN
   EJIW # 5352 W/ TYPE "M" COVER
   W/ 2' SUMP
   RIM 707.95
   12" E INV. 704.26
   12" N INV. 704.36
   12" S INV. 704.36
5. 4' DIA. CATCH BASIN
   EJIW # 5352 W/ TYPE "M" COVER
   W/ 2' SUMP
   RIM 707.95
   12" N INV. 704.44
   12" E INV. 704.54
6. 4' DIA. REAR YARD CATCH BASIN
   EJIW # 1040 W/ 6508 COVER
   W/ 2' SUMP
   RIM 708.30
   12" W INV. 704.88
   12" N INV. 704.98
   8" NW INV. 705.30
7. 4' DIA. REAR YARD CATCH BASIN
   EJIW # 1040 W/ 6508 COVER
   W/ 2' SUMP
   RIM 708.60
   12" S INV. 705.40
   8" SW INV. 705.75
8. 4' DIA. CATCH BASIN
   EJIW # 5352 W/ TYPE "M" COVER
   W/ 2' SUMP
   RIM 708.00
   12" S INV. 704.50
9. DETENTION SYSTEM OUTLET
   12" W INV. 701.86
10. 7' DIA. CONTROL STRUCTURE
    RIM 709.10
    12" E INV. 701.84
    12" W INV. 701.74
11. EX. COMBINED SEWER MAN HOLE
    RIM 707.09
    PROP. 12" E INV. 701.68
    EX. 12" N&S INV. ±700.00

WATER SERVICE

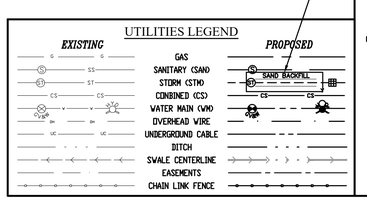
1. 1" LIVE TAP ON WATER MAIN
2. 1" STOP VALVE IN BOX
   RIM 708.35

WATER SERVICE BASIS OF DESIGN

1. COMMERCIAL SITE = 0.40 ACRE x 7 PEOPLE PER ACRE PER DAY = 3 PEOPLE / DAY
2. RESIDENTIAL EQUIVALENT UNITS (REU) = 4,645 S.F. x 0.4 / 1,000 S.F. = 1.86 REU
3. AVERAGE DAY FLOW = 150 G.P.D. x 3 PEOPLE / DAY = 450 G.P.D. = 0.00045 M.G.D.
4. DESIGN MAXIMUM DAY FLOW = 0.00045 M.G.D. x 2 = 0.0009 M.G.D.

NOTE: PIPES WITH THIS MARKING ARE WITHIN THE INFLUNCE OF PAVEMENT & SHALL BE BACKFILLED WITH MDOT CLASS II GRANULAR BACKFILL AT 95% COMPACTION

UTILITIES LEGEND



LEGEND

	AMERITECH		SIGNAL POLE
	WATER SHUT OFF		PUBLIC LIGHTING MH.
T	TELEPHONE RISER	E	ELECTRIC RISER OR METER
T	TELEPHONE		CATHODIC PROTECTION
C.O.	SEWER CLEAN OUT		GUY WIRE
G	GAS METER		HIGH TENSION TOWER
	GAS VALVE /GAS MARKER		FLAG POLE
	MANHOLE (MH.)		BOLLARD
	CATCH BASIN (C.B.)		STEEL COLUMN
GV	GATE VALVE IN WELL (G.V.W)		MAILBOX
	FIRE HYDRANT		SIGN
	STORM MANHOLE (ST. MH.)	TRANS	ELECTRIC TRANSFORMER
	FENCE POST	EX.	EXISTING
	UTILITY POLE	PROP.	PROPOSED
	UTILITY POLE W/ LAMP EXTENSION		WATER FLOW INDICATOR

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SEAL



SHEET
UTILITIES PLAN

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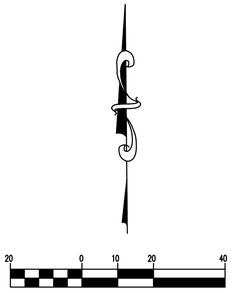
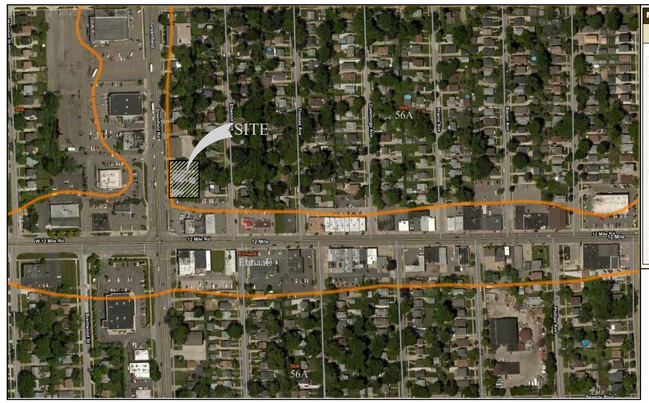
1326	SP-4





Map Unit Legend

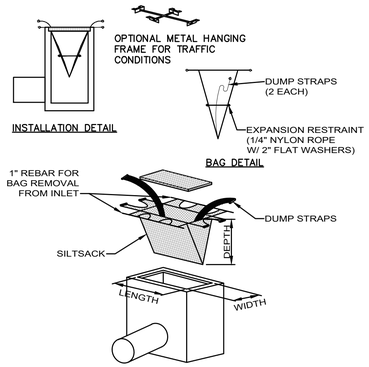
Oakland County, Michigan (MI125)

Oakland County, Michigan (MI125)

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
56A	Urban land-Blount-Lenawee complex, 0 to 3 percent slopes	86.5	76.6%
EtmaaE	Udorthents and Udipsamments, nearly level to hilly	26.4	23.4%
Totals for Area of Interest		**112.9**	**100.0%**

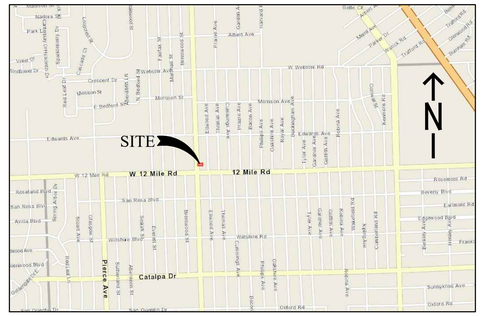
ESTIMATED SOIL EROSION QUANTITIES

	QUANTITY	UNITS
SILT FENCE	550	L.F.
R.Y.C.B. SILT FILTER	2	EA.
SILT SACK FILTER	4	EA.
CONSTRUCTION ACCESS ROAD 12" THICK	40	TONS



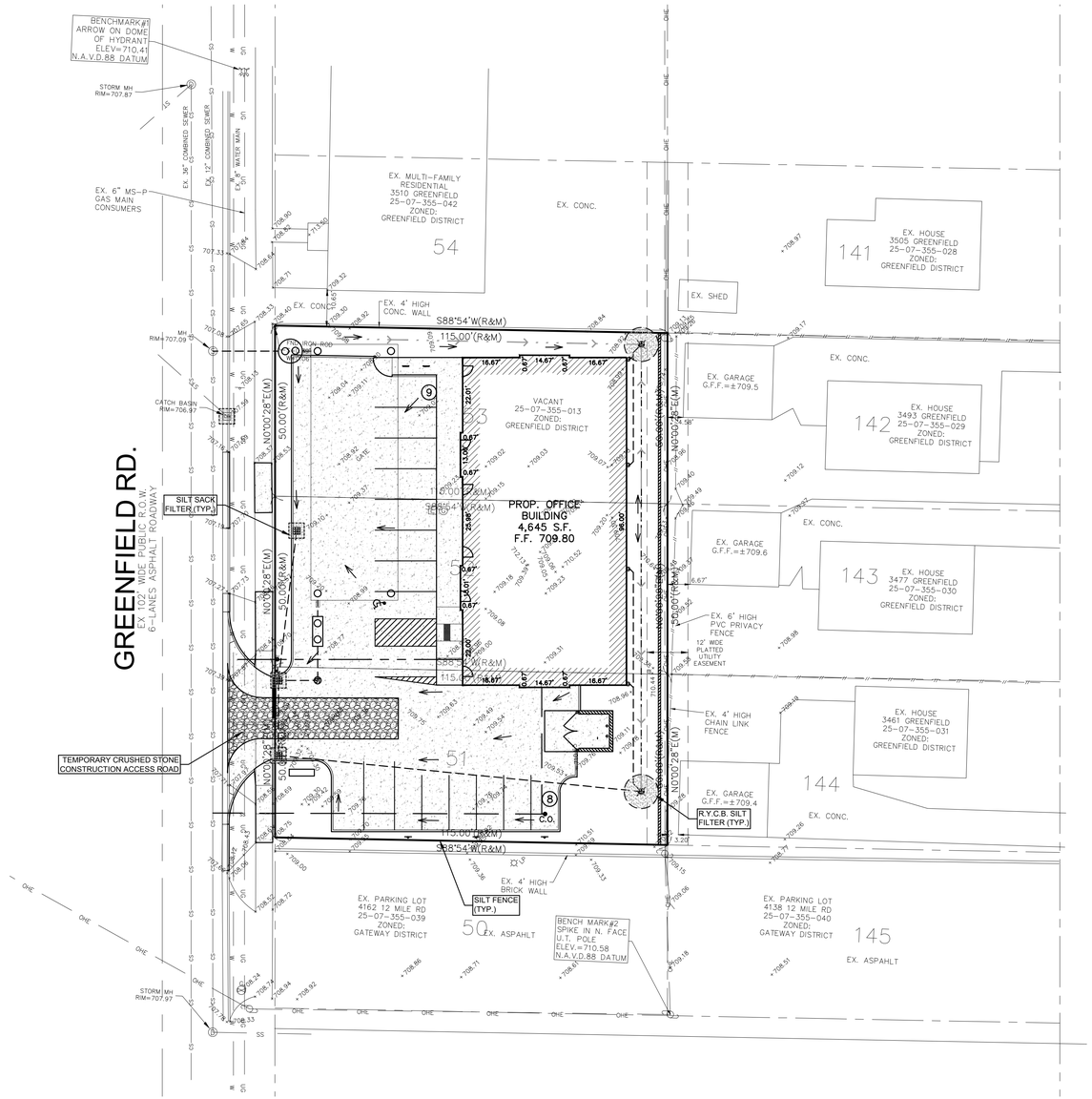
SILT SACK FILTER DETAIL

N.T.S.



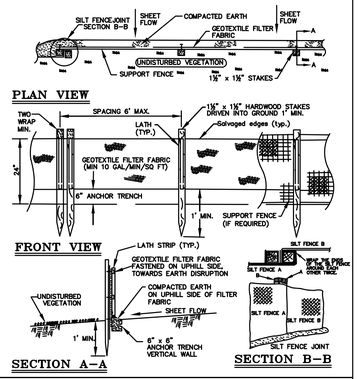
LOCATION MAP

N.T.S.

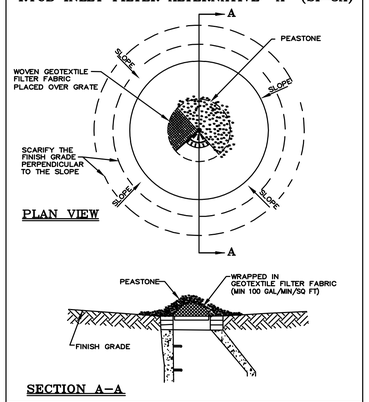


SILT FENCE (SP-2)

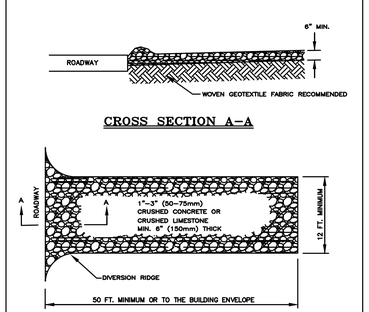
(MATERIAL: AMOCO PRO PEX 2130 OR APPROVED EQUIVALENT)



RYCB INLET FILTER ALTERNATIVE "A" (SI-3A)



TEMPORARY STONE ACCESS DRIVE (SP-9)



SOIL EROSION CONTROL NOTES

SOIL EROSION CONTROL MEASURES SHALL BE INSTALLED AND MAINTAINED ACCORDING TO OAKLAND COUNTY W.R.C. STANDARDS.

CUTTING, FILLING AND GRADING SHALL BE MINIMIZED AND THE NATURAL TOPOGRAPHY OF THE SITE SHALL BE PRESERVED TO THE MAXIMUM POSSIBLE EXTENT, EXCEPT WHERE SPECIFIC FINDINGS DEMONSTRATE THAT MAJOR ALTERATIONS WILL STILL MEET THE PURPOSES AND REQUIREMENTS OF THIS ORDINANCE.

DEVELOPMENT SHALL BE STAGED TO KEEP THE EXPOSED AREAS OF SOIL AS SMALL AS PRACTICABLE.

SOIL EROSION CONTROL MEASURES SHALL BE INSTALLED BETWEEN THE DISTURBED AREA AND ANY WATERCOURSES, INCLUDING RIVERS, STREAMS, CREEKS, LAKES, PONDS AND OTHER WATERCOURSES; WETLANDS; OR ROADWAYS ON OR NEAR THE SITE.

SEDIMENT RESULTING FROM ACCELERATED SOIL EROSION SHALL BE REMOVED FROM RUNOFF WATER BEFORE THAT WATER LEAVES THE SITE.

TEMPORARY AND PERMANENT SOIL EROSION CONTROL MEASURES DESIGNED AND CONSTRUCTED FOR THE CONVEYANCE OF WATER AROUND, THROUGH, OR AWAY FROM THE SITE SHALL BE DESIGNED TO LIMIT THE WATER FLOW TO A NON-EROSIVE VELOCITY.

TEMPORARY SOIL EROSION CONTROL MEASURES SHALL BE REMOVED AFTER PERMANENT SOIL EROSION CONTROL MEASURES HAVE BEEN IMPLEMENTED. ALL SITES SHALL BE STABILIZED WITH PERMANENT SOIL EROSION CONTROL MEASURES.

IF LAKES, PONDS, CREEKS, STREAMS, OR WETLANDS ARE LOCATED ON OR NEAR THE SITE, EROSION CONTROL MEASURES WHICH DIVERT RUNOFF AND TRAP SEDIMENT MUST BE PROVIDED AT STRATEGIC LOCATIONS. STRAW BALE BERMS MAY BE USED AS TEMPORARY STORM WATER DIVERSION STRUCTURES, BUT WILL NOT BE CONSIDERED SUFFICIENT FOR TRAPPING SEDIMENT. THE USE OF SEDIMENT BASINS, FILTER FABRIC, VEGETATED BUFFER STRIPS, AND ROCK FILTERS IN LIEU OF STRAW BALE BERMS SHALL BE STRONGLY ENCOURAGED. OTHER MEASURES MAY BE REQUIRED IF REASONABLY DETERMINED TO BE NECESSARY TO PROTECT A WATERCOURSE OR WETLAND.

WHEN IT IS NOT POSSIBLE TO PERMANENTLY STABILIZE A DISTURBED AREA AFTER AN EARTH CHANGE HAS BEEN COMPLETED OR WHEN SIGNIFICANT EARTH CHANGE ACTIVITY CEASES, TEMPORARY SOIL EROSION CONTROL MEASURES SHALL BE INSTALLED.

PERMANENT EROSION CONTROL MEASURES FOR ALL SLOPES, CHANNELS, DITCHES, OR ANY DISTURBED LAND AREA SHALL BE COMPLETED WITHIN 5 (FIVE) CALENDAR DAYS AFTER FINAL GRADING OR THE FINAL EARTH CHANGE HAS BEEN COMPLETED. ALL TEMPORARY SOIL EROSION CONTROL MEASURES SHALL BE MAINTAINED UNTIL PERMANENT SOIL EROSION CONTROL MEASURES ARE IMPLEMENTED.

VEGETATED BUFFER STRIPS SHALL BE CREATED OR RETAINED ALONG THE EDGES OF ALL LAKES, PONDS, CREEKS, STREAMS, OTHER WATERCOURSES, OR WETLANDS.

EROSION AND SEDIMENTATION CONTROL MEASURES SHALL RECEIVE WEEKLY MAINTENANCE AND AFTER EVERY STORM EVENT TO ASSURE PROPER FUNCTIONING BY THE CONTRACTOR.

ALL GRADING PLANS AND SPECIFICATIONS, INCLUDING EXTENSIONS OF PREVIOUSLY APPROVED PLANS, SHALL INCLUDE PROVISIONS FOR EROSION AND SEDIMENT CONTROL IN ACCORDANCE WITH, BUT NOT LIMITED TO, THE STANDARDS CONTAINED IN THE "STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL", PUBLISHED BY THE OAKLAND SOIL CONSERVATION DISTRICT.

VEGETATION SHALL BE ESTABLISHED WITHIN FIVE (5) DAYS OF FINAL GRADE, OR WHENEVER DISTURBED AREAS WILL REMAIN UNCHANGED FOR 30 DAYS OR GREATER. 3" TO 4" OF TOPSOIL WILL BE USED WHERE VEGETATION IS REQUIRED.

DIVERSION BERMS OR TERRACING SHALL BE IMPLEMENTED WHERE NECESSARY.

ALL DRAINAGE DITCHES SHALL BE STABILIZED WITH EROSION CONTROL BLANKETS AND SHALL UTILIZE CHECK DAMS AS NECESSARY. DRAINAGE DITCHES STEEPER THAT 3% SHALL BE SODDED.

SLOPES STEEPER THAN 1V:6H (16% SHALL BE STABILIZED WITH EROSION CONTROL BLANKETS.

SEQUENCE OF CONSTRUCTION

INSTALL CRUSHED CONCRETE ACCESS DRIVE AND TEMPORARY CULVERTS AT THE SITE ENTRANCE AS INDICATED ON THE PLANS.

INSTALL SILT FENCE OR SIMILAR APPROVED SILT BARRIER ALONG PROPERTY LINES AND AROUND SENSITIVE NATURAL FEATURES AS INDICATED ON THE PLANS.

EXCAVATE A SHALLOW SWALE/DITCH AROUND PERIMETER OF SITE. GRADE THE TEMPORARY SWALE TO AN EXISTING DRAINAGE FACILITY. PLACE OUTLET FILTER IN EXISTING UPSTREAM STORM SEWER FACILITIES.

IF INDICATED ON CONSTRUCTION PLANS, SEDIMENTATION BASINS, DETENTION POND, ETC., SHALL BE CONSTRUCTED PRIOR TO THE INSTALLATION OF ANY OTHER WORK.

STRIP EXISTING TOPSOIL, VEGETATION AND ORGANIC MATTER FROM BUILDING PAD AND PARKING AREAS. COMMENCE LAND BALANCE AND MASS GRADING OPERATIONS. MAINTAIN A MINIMUM BUFFER OF 15' OF EXISTING VEGETATION WHEREVER POSSIBLE AROUND SITE PERIMETER. STOCK PILES SHOULD BE LOCATED AWAY FROM EXISTING DRAINAGE FACILITIES.

EXCAVATE AND INSTALL UNDERGROUND UTILITIES. INSTALL INLET FILTERS AROUND ALL NEW STORM SEWER FACILITIES AS INDICATED ON THE PLANS. EXISTING AND PROPOSED STORM SEWER FACILITIES SHALL BE PROTECTED FROM EROSION AND SEDIMENT INFILTRATION AT ALL TIMES.

COMMENCE FINAL GRADING AND TRIMMING OPERATIONS. PREPARE SUBGRADE FOR INSTALLATION OF PROPOSED PAVEMENT.

SEED AND MULCH ALL DISTURBED SITE AREAS AND INSTALLED SITE LANDSCAPING.

REMOVE CONSTRUCTION DEBRIS AND JET VAC NEWLY INSTALLED STORM SEWER SYSTEM AS REQUIRED BY THE MUNICIPALITY.

REMOVE ALL REMAINING TEMPORARY SOIL EROSION AND SEDIMENTATION CONTROL MEASURES ONCE PERMANENT MEASURES ARE ESTABLISHED.

WHENEVER POSSIBLE, THE SITE SHALL BE GRADED TO WITHIN SIX INCHES (6") OF THE PROPOSED FINISH GRADE PRIOR TO INSTALLATION OF UNDERGROUND FACILITIES.

STAGING OF PROPOSED WORK SHALL BE COMPLETED BY THE CONTRACTOR AS REQUIRED TO ENSURE PROGRESSIVE STABILIZATION OF DISTURBED AREAS.

REMOVE ALL TEMPORARY SESC MEASURES ONCE SITE IS STABILIZED.

SEQUENCE OF CONSTRUCTION

OPERATION TIME SCHEDULE – BEGINNING 2022

		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
A	Soil Erosion Control Measures			XXX	XXX								
B	Excavate Foundations				XXX	XXX							
C	Backfill Foundations					XXX	XXX						
D	Stone Access Drive			XXX	XXX								
E	Complete All Earth Movement						XXX	XXX	XXX	XXX			
F	Seed & Mulch As Required								XXX	XXX			

SOIL EROSION LEGEND

- SILT FENCE
- LIMIT OF EARTH DISRUPTION
- CURB & GUTTER INLET FILTER
- LOW POINT FILTER
- TEMPORARY ACCESS ROAD

LEGEND

AMERITECH		SIGNAL POLE	
WATER SHUT OFF		PUBLIC LIGHTING MH.	
TELEPHONE RISER	T	ELECTRIC RISER OR METER	E
TELEPHONE		CATHODIC PROTECTION	
SEWER CLEAN OUT	C.O.	GUY WIRE	
GAS METER	G	HIGH TENSION TOWER	
GAS VALVE /GAS MARKER		FLAG POLE	
MANHOLE (MH.)		BOLLARD	
CATCH BASIN (C.B.)		STEEL COLUMN	
GATE VALVE IN WELL (G.V.W)	GV	MAILBOX	
FIRE HYDRANT		SIGN	
STORM MANHOLE (ST. MH.)	ST	ELECTRIC TRANSFORMER	TRANS
FENCE POST		EXISTING	EX.
UTILITY POLE		PROPOSED	PROP.
UTILITY POLE W/ LAMP EXTENSION		WATER FLOW INDICATOR	

Orman Engineering, LLC
5476 Vivian Lane
Waterford, MI 48327
phone: 248.682.6001
email: alex@ormanengineering.com

PROJECT

PROPOSED OFFICE BUILDING

CLIENT

North Green Trust
1359 Davis Ave.
Birmingham, MI 48009

Dan Winter
Cell: (313) 909-6800
Email:
primemangement@tir.com

SEAL

STATE OF MICHIGAN
ALEXANDER ORMAN
ENGINEER NO. 48878
LICENSED PROFESSIONAL ENGINEER

Know what's below Call before you dig.

REVISIONS

Date	Description
01-21-2022	REVISED PER CITY
12-01-2021	REVISED PER CITY
09-24-2021	SITE PLAN APPROVAL

Designed by:	Drawn by:
A.O.	S.D.M.

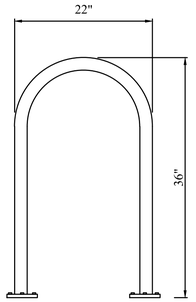
Approved by:	Date:
A.O.	08-20-2021

Scale: 1" = 20'

Job No.:	Sheet:
1326	SP-5

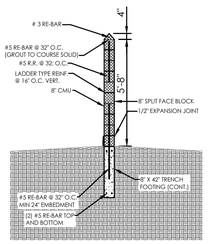
PROJECT LOCATION

3462 - 3478 Greenfield Rd.
City of Berkley,
Oakland County, MI 48072



TYPICAL "INVERTED U" BICYCLE RACK

N.T.S.



SCREEN WALL DETAIL

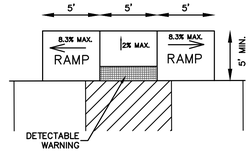
N.T.S.



EXAMPLE OF SPLIT FACE BLOCK

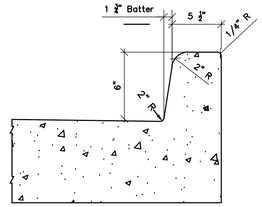
DETECTABLE WARNINGS SHALL CONSIST OF RAISED TRUNCATED DOMES WITH A DIAMETER OF NOMINAL 0.9 IN. (23 MM) A HEIGHT OF NOMINAL 0.2 IN. (5 MM) AND A CENTER TO CENTER SPACING OF NOMINAL 2.35 IN. (60 MM) AND SHALL CONTRAST VISUALLY WITH ADJOINING SURFACES, EITHER LIGHT-ON-DARK OR DARK-ON-LIGHT.

THE MATERIAL USED TO PROVIDE CONTRAST SHALL BE AN INTEGRAL PART OF THE WALKING SURFACE.



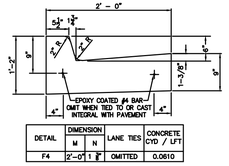
BARRIER FREE RAMP DETAIL

N.T.S.



6" INTEGRAL CURB DETAIL

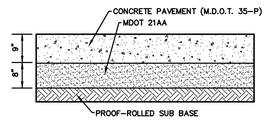
N.T.S.



DETAIL	DIMENSION M	DIMENSION N	LANE TIES	CONCRETE CYD / LFT
F4	2'-0"	1' 8"	OMITTED	0.0610

M.D.O.T. F4 CURB DETAIL

N.T.S.



9" CONCRETE SECTION FOR APPROACH

N.T.S.

Orman Engineering, LLC
5476 Vivian Lane
Waterford, MI 48327
phone: 248.682.6001
email: alex@ormanengineering.com

PROJECT

PROPOSED OFFICE BUILDING

CLIENT

North Green Trust
1359 Davis Ave.
Birmingham, MI 48009

Dan Winter
Cell: (313) 909-6800
Email:
primemangement@tir.com

SEAL



SHEET

SITE DETAILS & DETENTION CALCULATIONS

PROJECT LOCATION

3462 - 3478 Greenfield Rd.
City of Berkley,
Oakland County, MI 48072

Know what's **below** **Call** before you dig.

REVISIONS

Date	Description
01-21-2022	REVISED PER CITY
12-01-2021	REVISED PER CITY
09-24-2021	SITE PLAN APPROVAL

Designed by:	Drawn by:
A.O.	S.D.M.

Approved by:	Date:
A.O.	08-20-2021

Scale:

1" = 20'

Job No.:	Sheet:
1326	SP-6

Detention Pond Calculations Oakland County Method
100 Year Event

Runoff Volume Determination

Land Use	Runoff Coefficient	Drainage Area	
Pavement and Building	0.95	0.30	Acres
Detention Pond	1.00	0.00	Acres
Landscape/ Open Space	0.25	0.10	Acres
Total:		0.40	Acres
Weighted Runoff Coefficient "C" Factor =		0.78	

Determine Runoff Calculation:

Contributing Acreage, A =	0.40	Acres
Runoff Coefficient, C =	0.78	Imperviousness
Intensity, I =	6.11	In/Hour
Proposed Discharge, Qpr =	1.89	CFS

Determine Required Volume:

Allowable Outflow:	0.20	CFS/AC
Qa:	0.080	CFS
Qo(max):	0.258	CFS/AC.IMP.
Ts:	174.90	MIN
Vs:	12631.05	CF/AC.IMP.
Vt100:	3915.63	CF

Determine Provided Volume @ Elevation 691.10:

48" HDPE Pipe (feet)	Area (sf)	Volume (cf)
315	12.56	3956 CF

Determine Storm Water Runoff Treatment Sructure:

Actual Discharge from Storm Sewer, Qact =	1.89 CFS
Use KSI 350	

Control Structure Outlet Pipe and Flood Control Flow Restrictor Sizing

Zout:	700.50 FEET
Zt100:	704.60 FEET

FORMULA:

hmax =Zt100 - Zout Aout =Qmax/0.62x(2ghmax)^0.5

Dout =[(Aout)x 4 / 3.14)]^0.5]/12

Qmax:	0.258 CFS
Assume the outlet is 12"DIA RCP pipe:	1.00 FEET
Zout:	701.50 FEET
hmax:	3.10 FEET
Aout:	0.029 SF
Dout:	2.32 INCHES
Ao (2"):	0.022 SF
The actual maximum release rate through the flow restrictor and outlet pipe is:	
Qmax:	0.222 CFS
Qmax = 0.222 CFS < 0.252 CFS	

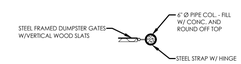
Outlet Pipe Size and Slope

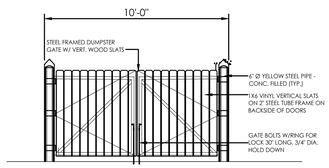
FORMULA:

n =0.013 for RCP Pipe V =Qpeak/Aout

R =Dout/4 S =[(Qmax x n)/(1.486 x Aout x R^2/3)]

Qpeak:	1.89 CFS
Assume the outlet is 12"DIA RCP pipe	
R:	0.25 FEET
S:	0.0028 FT/FT
Use 12" RCP Pipe at min. slope of 0.32%	

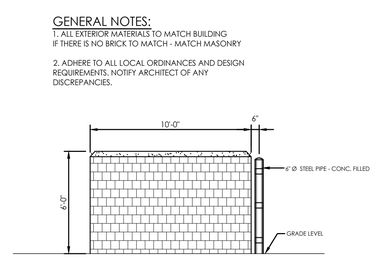


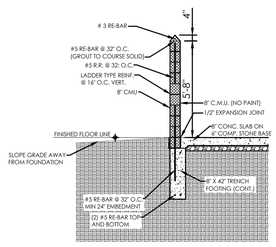


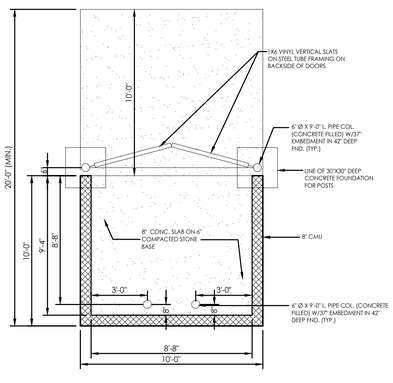
GENERAL NOTES:

1. ALL EXTERIOR MATERIALS TO MATCH BUILDING IF THERE IS NO BRICK TO MATCH - MATCH MASONRY

2. ADHERE TO ALL LOCAL ORDINANCES AND DESIGN REQUIREMENTS. NOTIFY ARCHITECT OF ANY DISCREPANCIES.

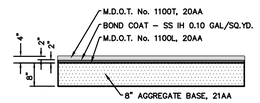






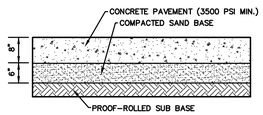
Dumpster Enclosure Plan

N.T.S.



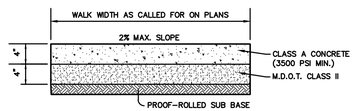
4" ASPHALT PAVING SECTION

N.T.S.



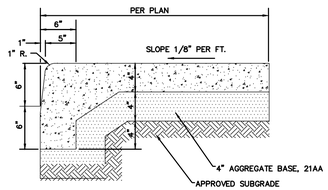
8" CONCRETE SECTION

N.T.S.



CONCRETE SIDEWALK SECTION

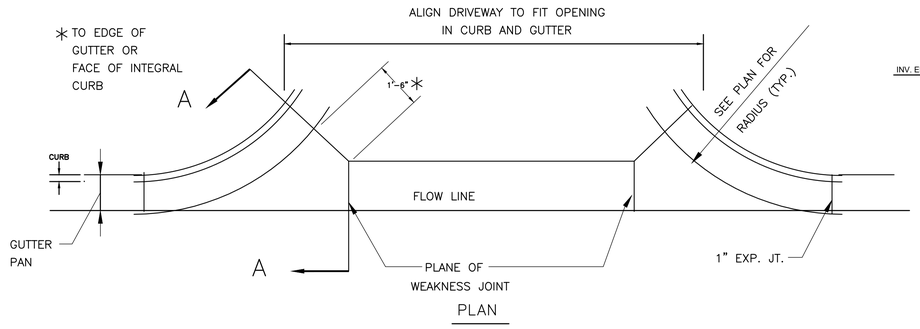
N.T.S.



6" MONOLITHIC CURB AND WALK

N.T.S.

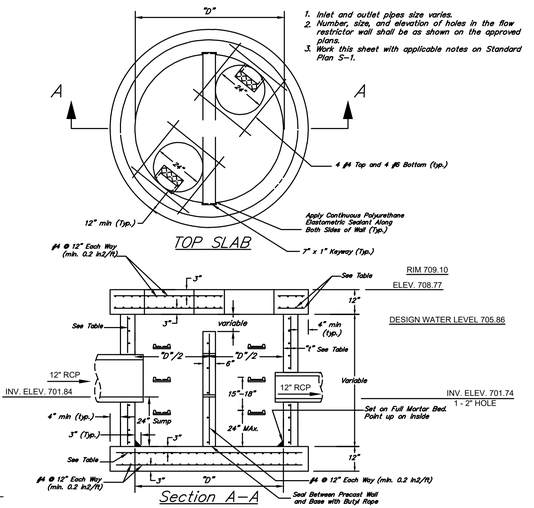
SECTION A-A



PLAN

DETAIL "M" CONCRETE DRIVEWAY OPENING

N.T.S.



STRUCTURE DIAMETER "D"	TOP SLAB REINFORCEMENT (BOTTOM LAYER) BAR SIZE AND SPACING (S_M)	TOP SLAB REINFORCEMENT (BOTTOM LAYER) STEEL AREA IN2/FT	BOTTOM SLAB REINFORCEMENT (TOP LAYER) BAR SIZE AND SPACING (S_M)	BOTTOM SLAB REINFORCEMENT (TOP LAYER) STEEL AREA IN2/FT	WALL THICKNESS "t"	WALL STEEL AREA IN2/FT
72"	#5 @ 10"	0.53	#5 @ 12"	0.31	7"	0.24

FLOW RESTRICTOR WITH OVER FLOW

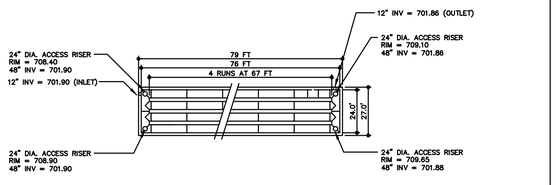
SCALE
NOT TO SCALE

PRECAST FLOW RESTRICTOR STRUCTURE

SYSTEM CAPACITY
48" DIA. = 12.56 CF/FT
(4 RUNS X 67 FT) + (2 RUNS X 24) = 316 LF
316 FT X 12.56 CF/FT = 3,968 CF OF STORAGE PROVIDED

INSTALL SYSTEM PER ASTM D2321, BACKFILL WITH MDOT 21AA AGGREGATE COMPACT TO 95% MODIFIED PROCTOR IN 8" LIFTS

SEE INSTALLATION NOTE ON PAGE 2



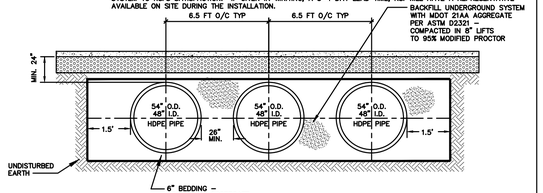
48" HDPE SOLID UNDERGROUND DETENTION SYSTEM
NO SCALE

NOTE:
HDPE PIPE MANUFACTURERED
PER ASSHTO M294, TYPE S, LATEST EDITION
UNDERGROUND DETENTION SYSTEM DISTRIBUTED BY
KENNEDY SOLUTIONS INC. 800-699-4046

DESIGN BY: AG / RK	REV: DATE: 11-2-21	1 OF 4	
MANUF. APPROVAL BY: -	SCALE: NTS	SHEET NO.	
DRAWING NO. 48 UGDS v1			

KSI — KENNEDY SOLUTIONS, INC. 2111 Sage Lake Road Prescott, MI 48756 Ph: 800-699-4046

INSTALLATION NOTE:
HDPE UNDERGROUND DETENTION SYSTEM SHALL BE INSTALLED IN ACCORDANCE WITH ASTM D2321. CARE SHOULD BE EXERCISED WITH CONSTRUCTION EQUIPMENT DURING INSTALLATION TO PROTECT THE SYSTEM FROM DAMAGE DUE TO POINT AND IMPACT LOADING. USE A LARGE EXCAVATOR TO PLACE STONE BETWEEN AND ABOVE THE PIPE IS PREFERRABLE. COMPACTION OF THE 21AA STONE IN 8 INCH LIFTS TO 6 INCHES ABOVE PIPE. USE A VIBRATORY COMPACTOR, NOT A HOE PACK.
PLACE THE REMAINING
21AA STONE USING A TRACKED PIECE OF EQUIPMENT (DOZER) OR CONTINUE USING THE LARGE EQUIP. DESCRIBED ABOVE. DO NOT USE RUBBER TIRED EQUIP.
ONCE THE SYSTEM IS INSTALLED, PLACE A ORANGE SAFETY FENCE 4–5 FT HIGH W/ TEE POST, AROUND THE SYSTEM. PLACE FENCE 5 FT BEYOND GRID FOOTPRINT. ANY DAMAGE TO THE SYSTEM AS A RESULT OF NOT FOLLOWING THESE INSTRUCTIONS AND THE BLUEPRINT DETAILS, SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO REPAIR THE SYSTEM TO KSI'S SATISFACTION. IF GIVEN IN WRITING, A 3–4 DAY LEAD TIME, KSI WILL HAVE A REPRESENTATIVE AVAILABLE ON SITE DURING THE INSTALLATION.



NOTES:
1. HDPE PIPE & FITTINGS SHALL CONFORM TO AASHTO M–294, TYPE S, LATEST EDITION
2. INSTALL UNDERGROUND DETENTION SYSTEM IN ACCORDANCE WITH ASTM D 2321, "STANDARD PRACTICE FOR UNDERGROUND INSTALLATION OF THERMOPLASTIC PIPE OR SEWER AND OTHER GRAVITY FLOW APPLICATIONS"
3. MEASURES SHALL BE TAKEN TO PREVENT MIGRATION OF NATIVE FINES INTO BACKFILL MATERIAL.

TYPICAL CROSS SECTION FOR 48" HDPE SOLID UNDERGROUND DETENTION SYSTEM
NO SCALE

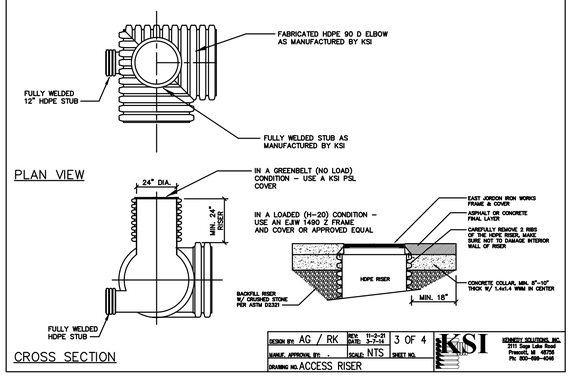
NOTE:
***DESIGN ENGINEER TO DETERMINE IF SITE CONDITIONS REQUIRE THE USE OF NON WOVEN FABRIC OR GEOGRID

DESIGN BY: AG / RK	REV: DATE: 11-2-21	2 OF 4	
MANUF. APPROVAL BY: -	SCALE: NTS	SHEET NO.	
DRAWING NO. 48 UGDS CROSS SECTION v1			

KSI — KENNEDY SOLUTIONS, INC. 2111 Sage Lake Road Prescott, MI 48756 Ph: 800-699-4046

TYPICAL ACCESS RISER SECTION

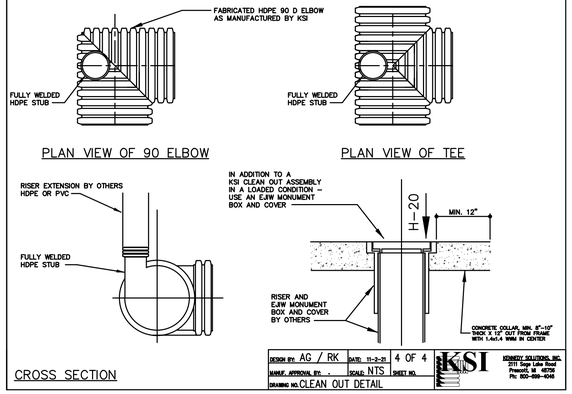
24" DIA. ACCESS MANHOLE IN HDPE ELBOW



DESIGN BY: AG / RK	REV: 11-2-21 DATE: 3-7-14	3 OF 4	
MANUF. APPROVAL BY: -	SCALE: NTS	SHEET NO.	
DRAWING NO. ACCESS RISER			

KSI — KENNEDY SOLUTIONS, INC. 2111 Sage Lake Road Prescott, MI 48756 Ph: 800-699-4046

TYPICAL CLEAN OUT DETAIL



DESIGN BY: AG / RK	DATE: 11-2-21	4 OF 4	
MANUF. APPROVAL BY: -	SCALE: NTS	SHEET NO.	
DRAWING NO. CLEAN OUT DETAIL			

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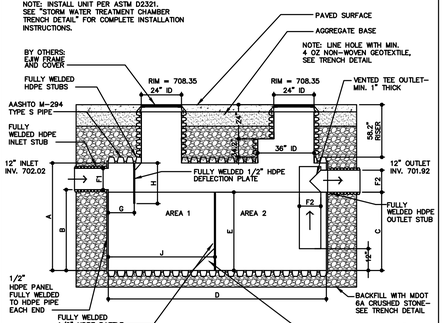
STORM WATER TREATMENT CHAMBER
KSI SERIES 350X HDPE CHAMBER



STORM WATER TREATMENT CHAMBER DIMENSIONS AND CAPACITIES

MODEL NO.	A	B	C	D	E	F1	F2	G	H	J	AREA 1	AREA 2
350X–48–12	48"	32"	32"	96"	32"	12"	12"	12"	21"	48"	24 CF	31 CF

DESIGN BY: AG / RK	REV: 11-2-21 DATE: 10-25-20	1 OF 1	
MANUF. APPROVAL BY: -	SCALE: NTS	SHEET NO.	
DRAWING NO. SERIES 350X SWTC v8.1.21			

KSI — KENNEDY SOLUTIONS, INC. 2111 Sage Lake Road Prescott, MI 48756 Ph: 800-699-4046

STORM WATER TREATMENT CHAMBER
INSTALLATION AND MAINTENANCE GUIDELINES

INSTALLATION GUIDELINES

1. EXCAVATE AREA FOR KSI SWTC AND PREPARE TRENCH BOTTOM PER ASTM D2321, SECTIONS 6 & 7.

2. THE KSI SWTC SHALL BE INSTALLED ON A BED OF NO LESS THAN 12" MDOT 6A CRUSHED STONE MATERIALS COMPACTED TO 95% PROCTOR DENSITY. COMPACTED TO 95% (90% MIN. FOR MDOT 6A CRUSHED STONE MATERIAL) OF THE BACKFILL MATERIAL'S MAXIMUM WEIGHT AT A MOISTURE CONTENT NOT GREATER THAN THE OPTIMUM.

3. INSTALL KSI SWTC UNIT, HIGH FLOW BYPASS LINE (IF APPLICABLE), DIVERSION STRUCTURE AND EXITING STRUCTURE AT ELEVATIONS INDICATED ON SITE PLAN. COUPLE INLET AND OUTLET HDPE SPLIT COUPLERS TO CONVEYANCE PIPE.

4. BACKFILL UNIT WITH MDOT 6A CRUSHED STONE MATERIALS PER ASTM D2321. BACKFILL SHALL BE COMPACTED TO 95% PROCTOR DENSITY.

5. THE HDPE ACCESS RISERS SHALL BE FIELD CUT TO FINISH GRADE BY THE CONTRACTOR. SEE RISER INSTALLATION OPTIONS PAGE.

6. KSI RECOMMENDS FILLING THE UNIT WITH WATER UPON COMPLETION OF INSTALLATION UP TO THE BAFFLE HEIGHT.

7. ONCE THE UNIT IS INSTALLED, PLACE A ORANGE SAFETY FENCE 4–5 FT HIGH W/ TEE POST, AROUND THE SYSTEM. PLACE FENCE 5 FT BEYOND GRID FOOTPRINT. ANY DAMAGE TO THE SYSTEM AS A RESULT OF NOT FOLLOWING THESE INSTRUCTIONS AND THE BLUEPRINT DETAILS, SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO REPAIR THE SYSTEM TO KSI'S SATISFACTION. IF GIVEN IN WRITING, A 3–4 DAY LEAD TIME, KSI WILL HAVE A REPRESENTATIVE AVAILABLE ON SITE DURING THE INSTALLATION.

MAINTENANCE GUIDELINES

1. ALL STORM WATER TREATMENT CHAMBERS WILL REQUIRE PERIODIC MAINTENANCE DEPENDING ON SPECIFIC SITE CONDITIONS.

2. KSI RECOMMENDS CLEANING THE SWTC QUARTERLY AND AFTER HEAVY RAIN STORMS. SEDIMENT IS EASIER TO REMOVE WHEN IT IS REMOVED ON A REGULAR BASIS.

3. DISPOSAL OF MATERIAL FROM THE KSI SWTC ARE SIMILAR TO THAT OF ANY OTHER BEST MANAGEMENT PRACTICES (BMP'). LOCAL GUIDELINES SHOULD BE CONSULTED PRIOR TO DISPOSAL OF THE SWTC CONTENTS. PETROLEUM WASTE PRODUCTS SHOULD BE REMOVED BY A LICENSED WASTE MANAGEMENT COMPANY.

4. IF A HYDROCARBON REMOVAL SYSTEM WAS INSTALLED – REPLACE IT WHEN IT TURNS BLACK. UNIT CAN BE DISPOSED OF VIA NORMAL REFUSE REMOVAL. SPENT UNIT DOES NOT LEACH CAPTURED CONTAMINATES.

WHITE = NEW
GRAY = WORKING
BLACK = SPENT – NEEDS REPLACEMENT – CONTACT KSI FOR REPLACEMENT PARTS

5. AFTER CLEANING THE UNIT – KSI RECOMMENDS REFILLING THE UNIT WITH WATER

DESIGN BY: AG / RK	REV: 8–1–21 DATE: 4–17–08	1 OF 1	
MANUF. APPROVAL BY: -	SCALE: NTS	SHEET NO.	
DRAWING NO. SWTC INSTALL & MAINT.			

KSI — KENNEDY SOLUTIONS, INC. 2111 Sage Lake Road Prescott, MI 48756 Ph: 800-699-4046

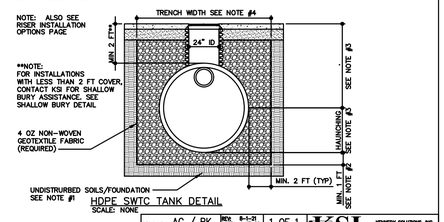
STORM WATER TREATMENT CHAMBER TRENCH DETAIL

NOTES:
1. FOUNDATION: WHERE THE TRENCH BOTTOM IS UNSTABLE, THE CONTRACTOR SHALL EXCAVATE TO A DEPTH REQUIRED BY THE ENGINEER AND REPLACE WITH A FOUNDATION OF MDOT 6A CRUSHED STONE AS DEFINED IN ASTM D2321, LATEST EDITION; AS AN ALTERNATIVE TRENCH BOTTOM MAY BE STABILIZED USING A WOVEN GEOTEXTILE FABRIC AND OR A GEOGRID.
2. BEDDING: SUITABLE MATERIAL SHALL BE MDOT 6A CRUSHED STONE INSTALLED AS REQUIRED IN ASTM D2321, LATEST EDITION. UNLESS OTHERWISE SPECIFIED BY THE ENGINEER, MINIMUM BEDDING THICKNESS SHALL BE 12" FOR 36"–120" DIA. SWTC.
3. HAUNCHING AND INITIAL BACKFILL: SUITABLE MATERIAL SHALL BE MDOT 6A CRUSHED STONE AND INSTALLED AS REQUIRED IN ASTM D2321, LATEST EDITION, MAXIMUM TEN INCH (10") LIFTS.
4. UNLESS OTHERWISE SPECIFIED BY THE ENGINEER, MIN. TRENCH WIDTHS ARE AS FOLLOWS

NOMINAL I.D.	NOMINAL O.D.	MINIMUM RECOMM. TRENCH WIDTH
36"	42"	90"
48"	54"	102"
60"	66"	114"
72"	80.5"	129"
96"	105.9"	154"
120"	131.3"	190"

5. MINIMUM COVER: MINIMUM RECOMMENDED COVER FOR VARIOUS LIVE LOADING CONDITIONS ARE AS SUMMARIZED IN THE FOLLOWING TABLE. UNLESS OTHERWISE NOTED, ALL DIMENSIONS ARE TAKEN FROM THE TOP OF THE SWTC TANK TO THE GROUND SURFACE.

SURFACE LIVE LOAD	MINIMUM REQUIRED COVER FOR WAYNE COUNTY (ALL SIZES)
HS–25/H25 (FLEXIBLE PAVEMENT)	MIN. 24" AS MEASURED FROM THE BOTTOM OF THE FLEXIBLE PAVEMENT
HS–25/H25 (RIGID PAVEMENT)	MIN. 24" AS MEASURED FROM THE TOP OF THE RIGID PAVEMENT
E80 RAILWAY	24"
HEAVY CONSTRUCTION	48"



DESIGN BY: AG / RK	REV: 8–1–21 DATE: 1–13–09	1 OF 1	
MANUF. APPROVAL BY: -	SCALE: NTS	SHEET NO.	
DRAWING NO. SWTC INSTALLATION DETAIL			

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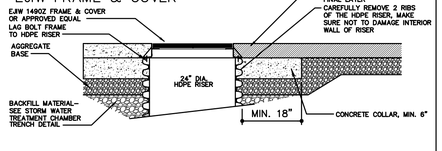
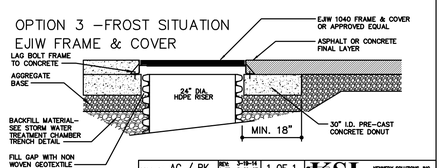
KSI RISER INSTALLATION OPTIONS
FOR PAVED SURFACE APPLICATIONS

OPTION 1
KSI POLY COATED STEEL COVER



OPTION 2
EJIW FRAME & COVER



OPTION 3 –FROST SITUATION
EJIW FRAME & COVER



DESIGN BY: AG / RK	REV: 3–19–14 DATE: 8–28–07	1 OF 1	
MANUF. APPROVAL BY: -	SCALE: NTS	SHEET NO.	
DRAWING NO. RISER INSTALLATION			

KSI — KENNEDY SOLUTIONS, INC. 2111 Sage Lake Road Prescott, MI 48756 Ph: 800-699-4046

OE Engineering

Orman Engineering, LLC
5476 Vivian Lane
Waterford, MI 48327
phone: 248.682.6001
email: alex@ormanengineering.com

PROJECT
PROPOSED OFFICE BUILDING

CLIENT
North Green Trust
1359 Davis Ave.
Birmingham, MI 48009

Dan Winter
Cell: (313) 909-6800
Email:
primemangement@tir.com

SEAL

STATE OF MICHIGAN
ALEXANDER ORMAN
ENGINEER
NO. 48878
LICENSED PROFESSIONAL ENGINEER

SHEET
KSI DETAILS

PROJECT LOCATION
3462 - 3478 Greenfield Rd.
City of Berkley,
Oakland County, MI 48072

811 Know what's below Call before you dig.

REVISIONS

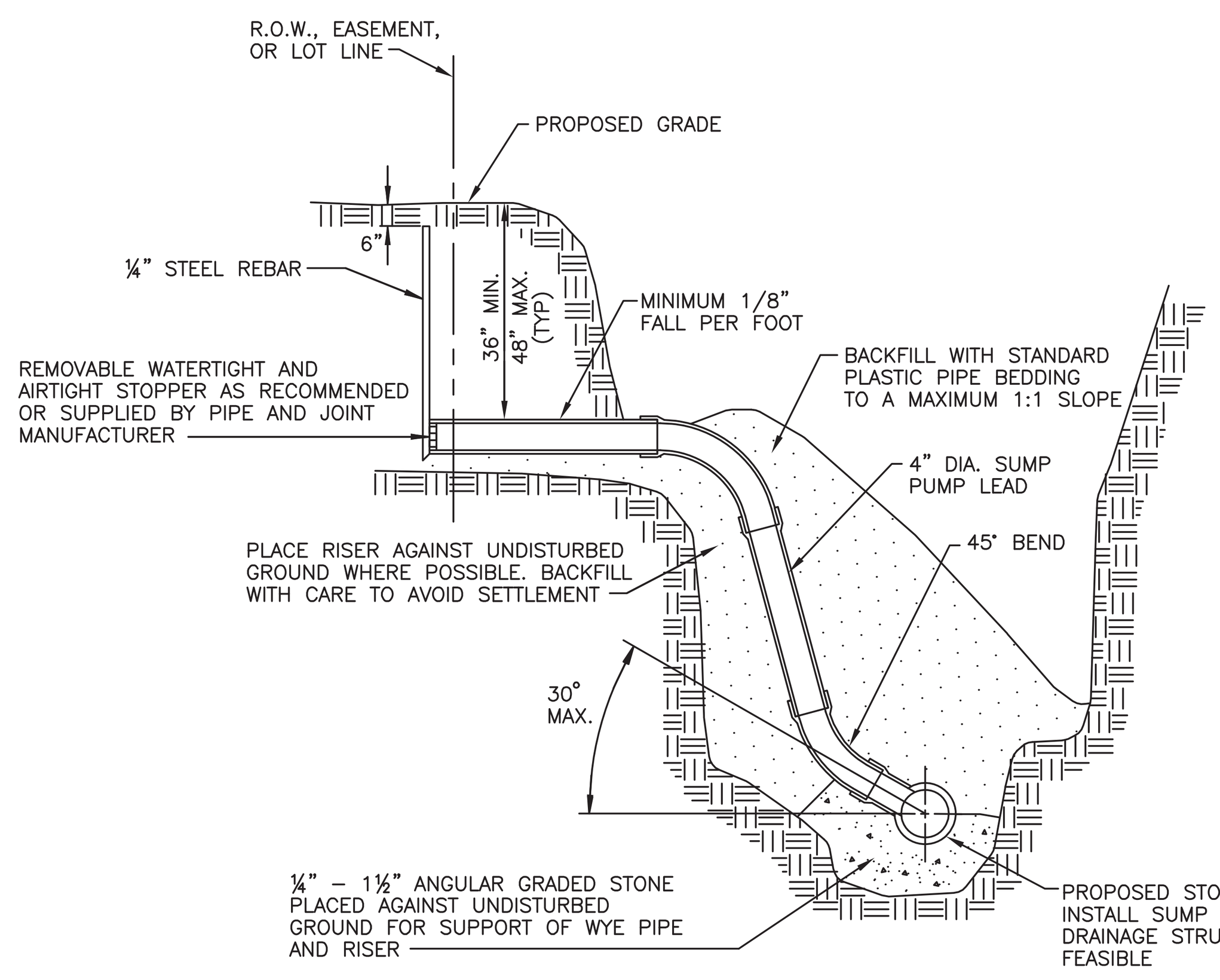
Date	Description
01-21-2022	REVISED PER CITY
12-01-2021	REVISED PER CITY
09-24-2021	SITE PLAN APPROVAL

Designed by:	Drawn by:
A.O.	S.D.M.

Approved by:	Date:
A.O.	08-20-2021

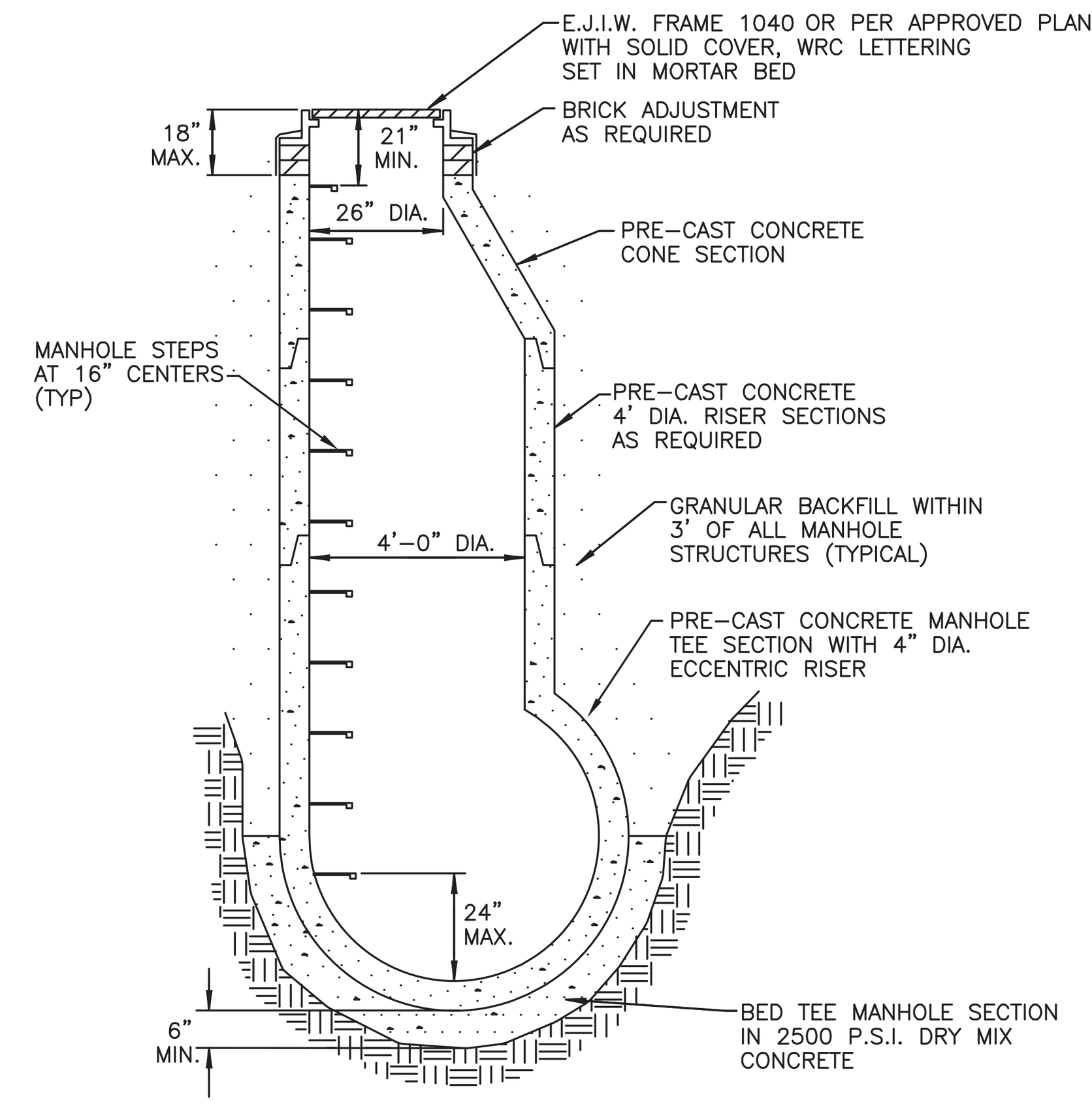
Scale:
1" = 20'

Job No.:	Sheet:
1326	SP-7



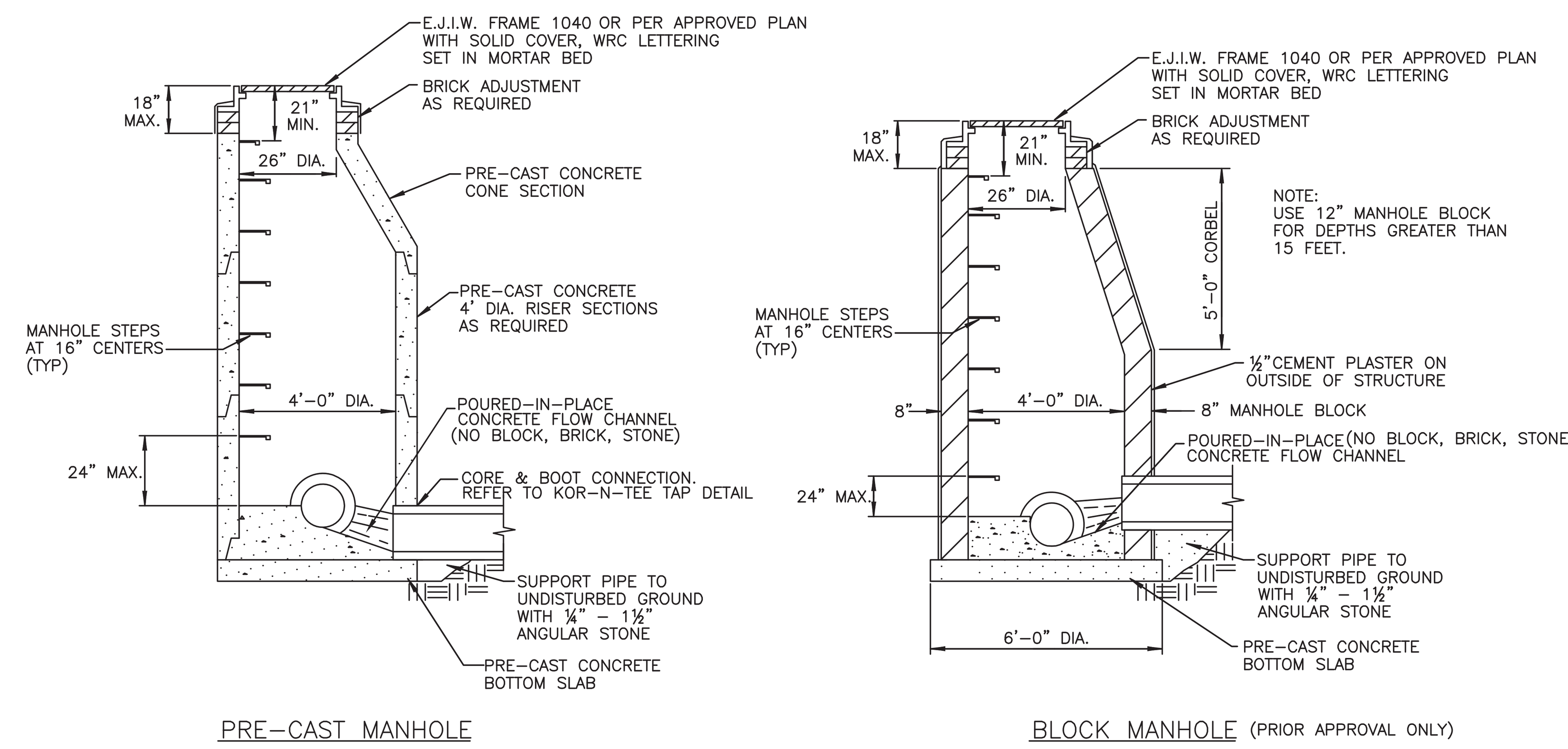
HOUSE LEAD DETAIL FOR 4" DIA. PLASTIC SUMP PUMP LEADS

NO SCALE



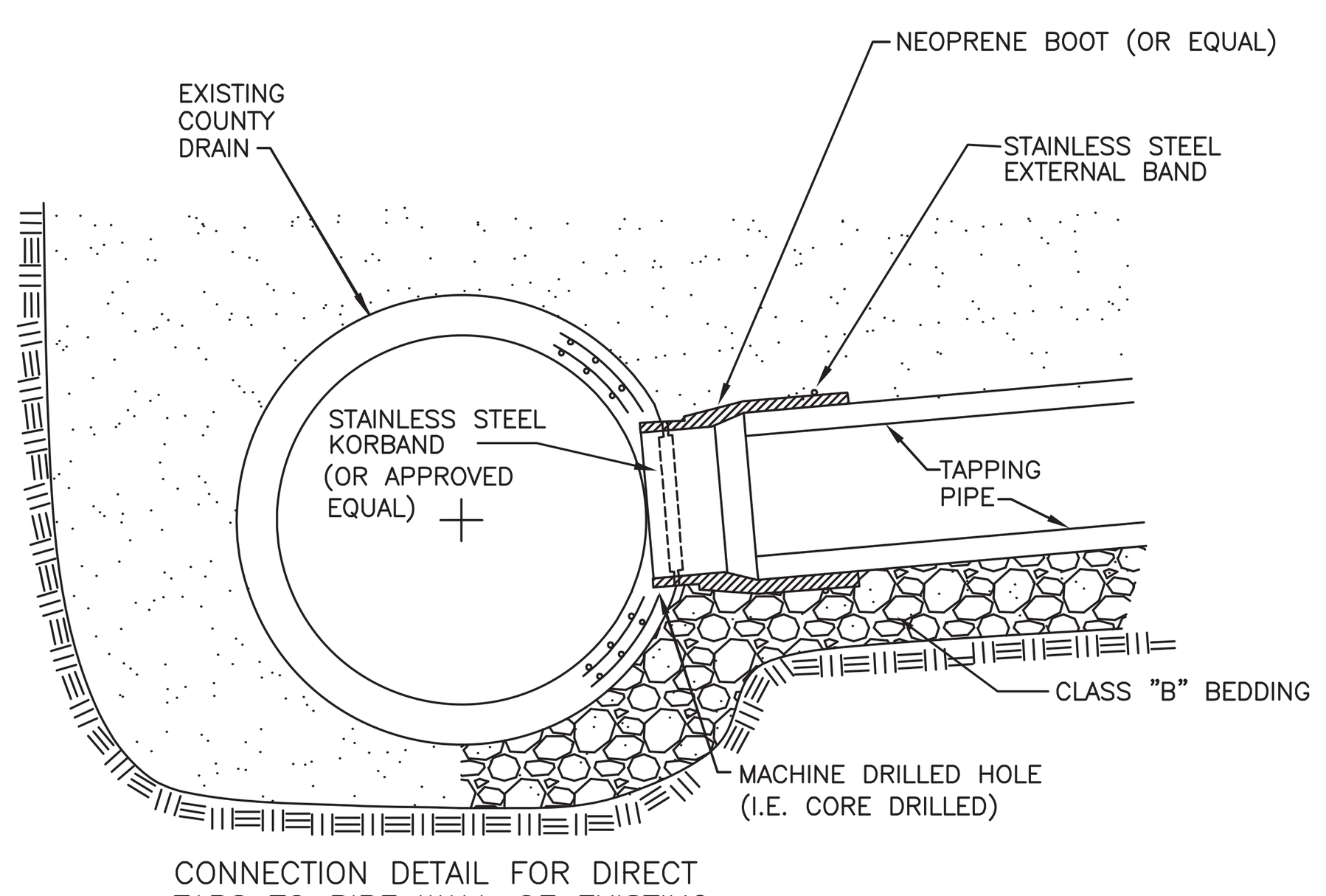
PRE-CAST TEE MANHOLE DETAIL

NO SCALE



STANDARD MANHOLE DETAILS

NO SCALE

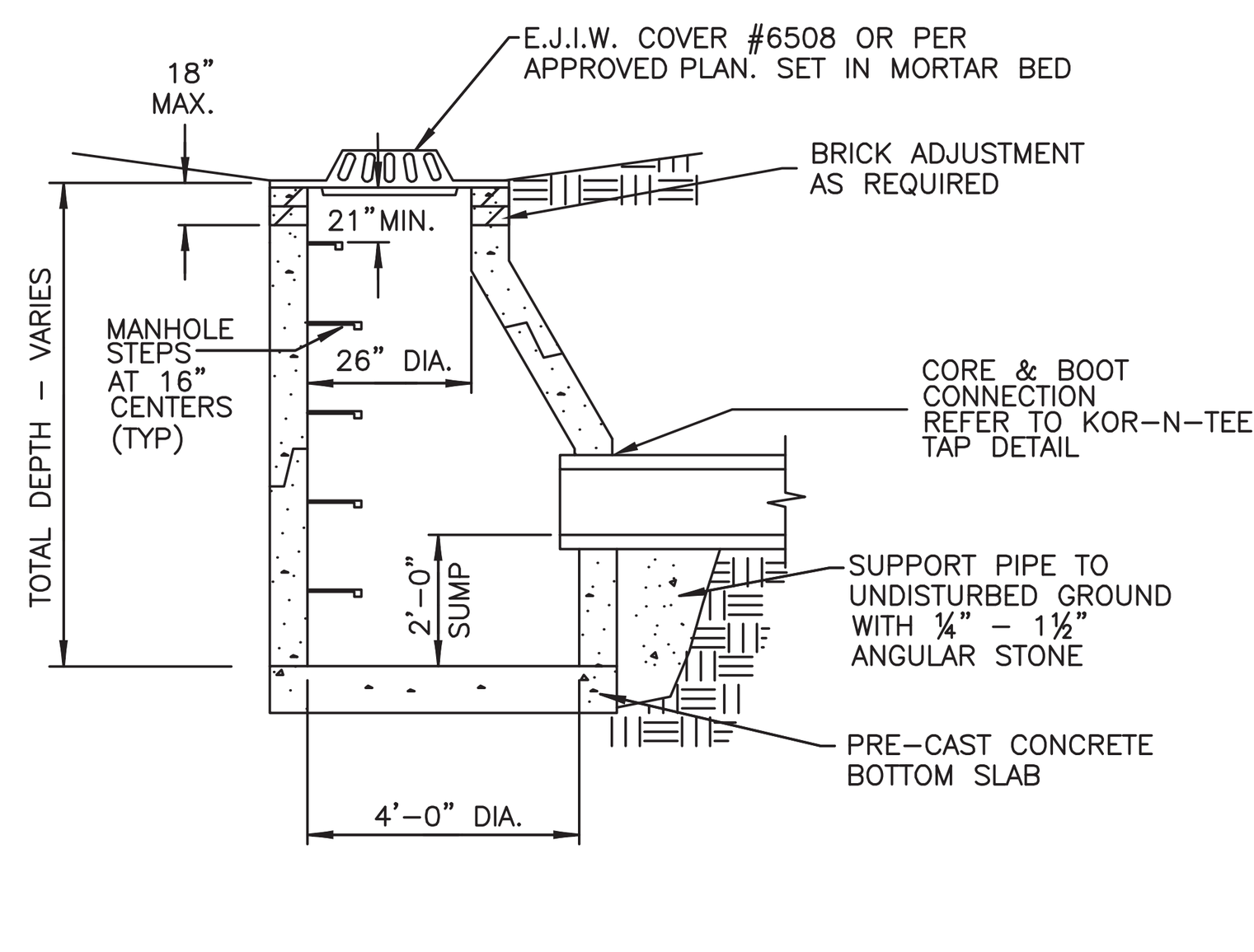


CONNECTION DETAIL FOR DIRECT TAPS TO PIPE WALL OF EXISTING COUNTY DRAINS.

KOR-N-TEE TAP (OR APPROVED EQUAL)

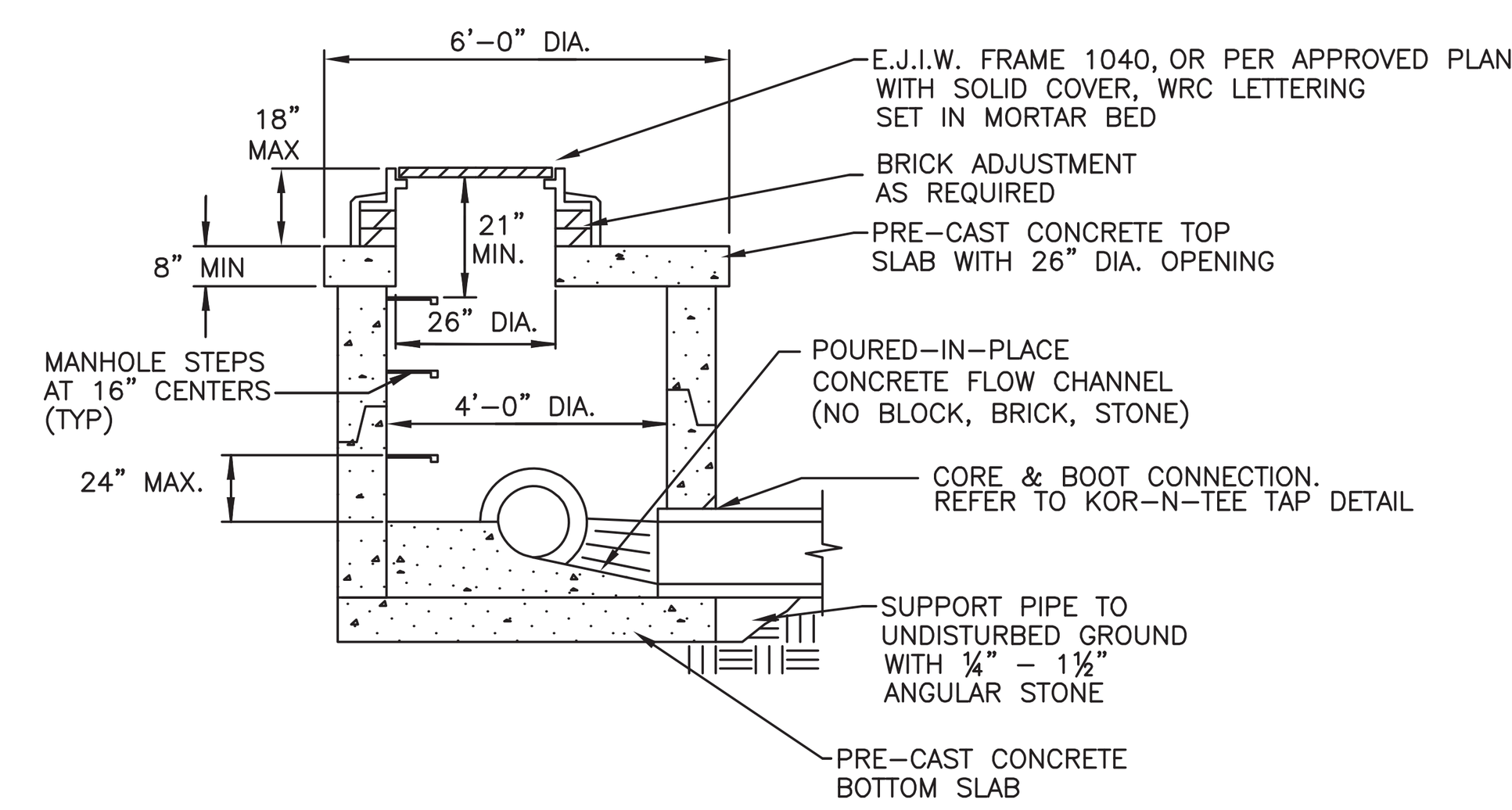
NO SCALE

* For non-concrete to concrete taps.
* Use link-seal, A-lock or approved equal for concrete to concrete taps.



PRE-CAST CATCH BASIN DETAIL

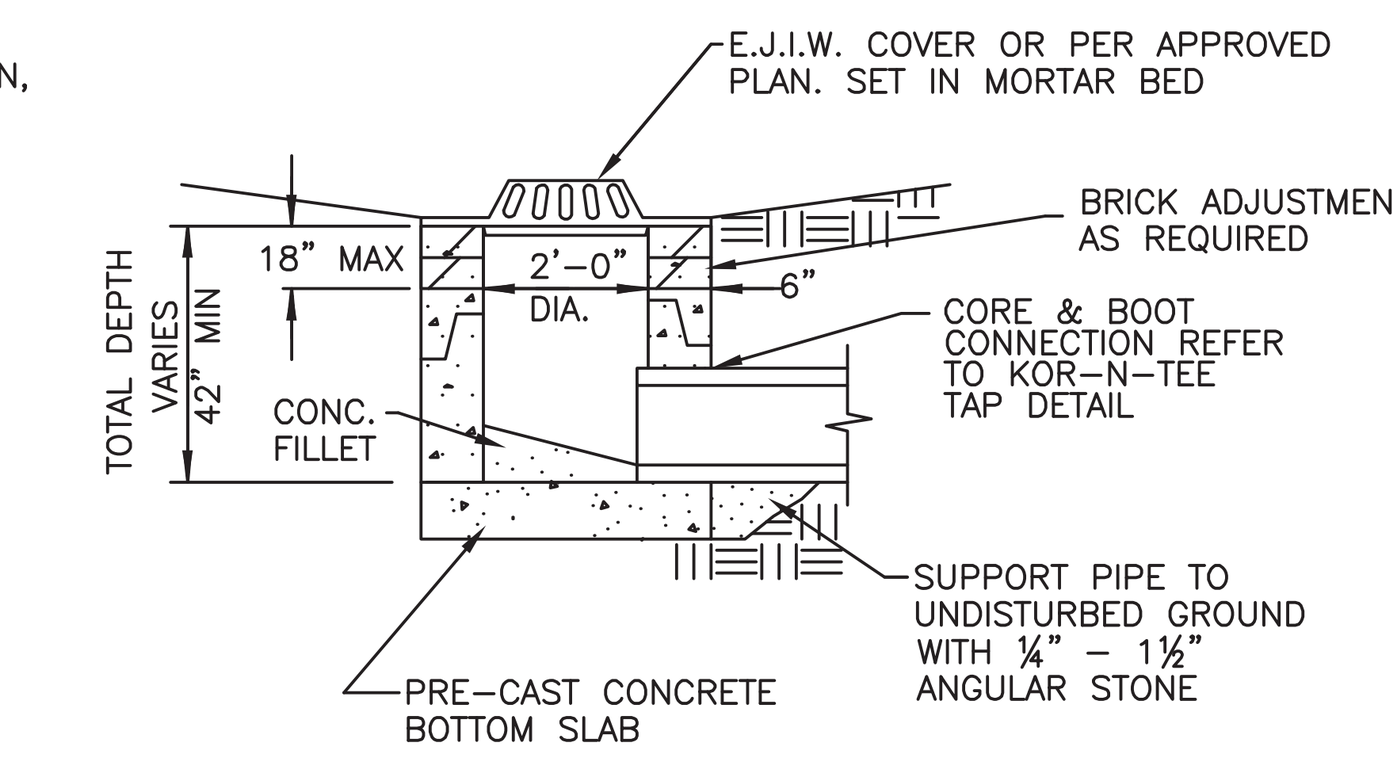
NO SCALE



PRE-CAST LOW HEAD MANHOLE DETAIL

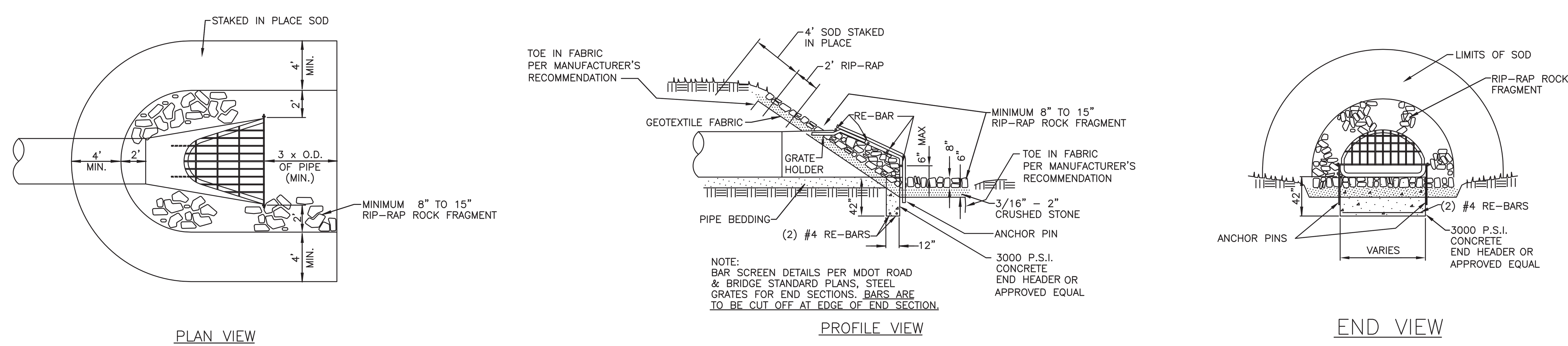
NO SCALE

(PRIOR APPROVAL ONLY)



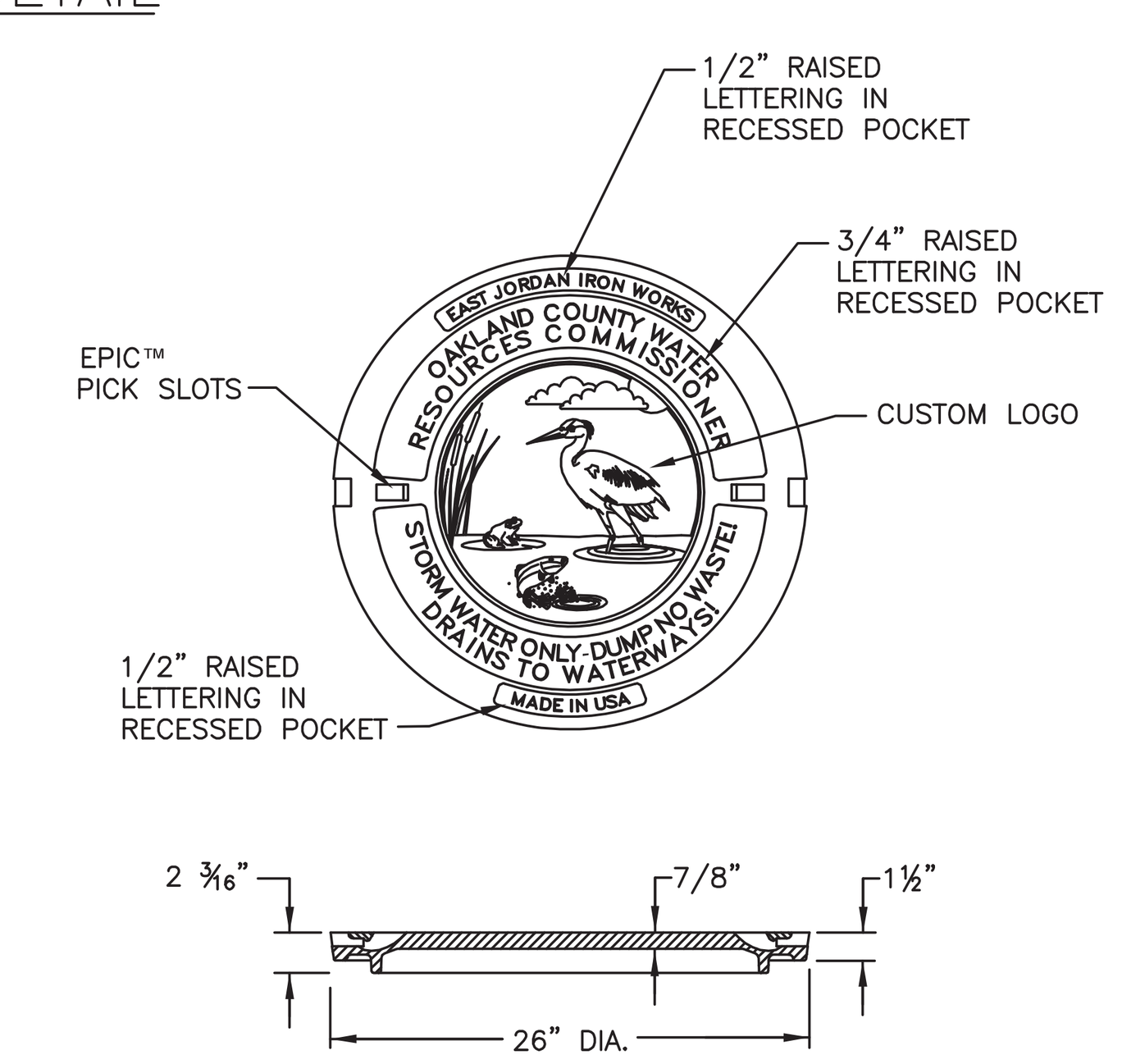
PRE-CAST INLET DETAIL

NO SCALE



END SECTION AND BAR SCREEN DETAIL

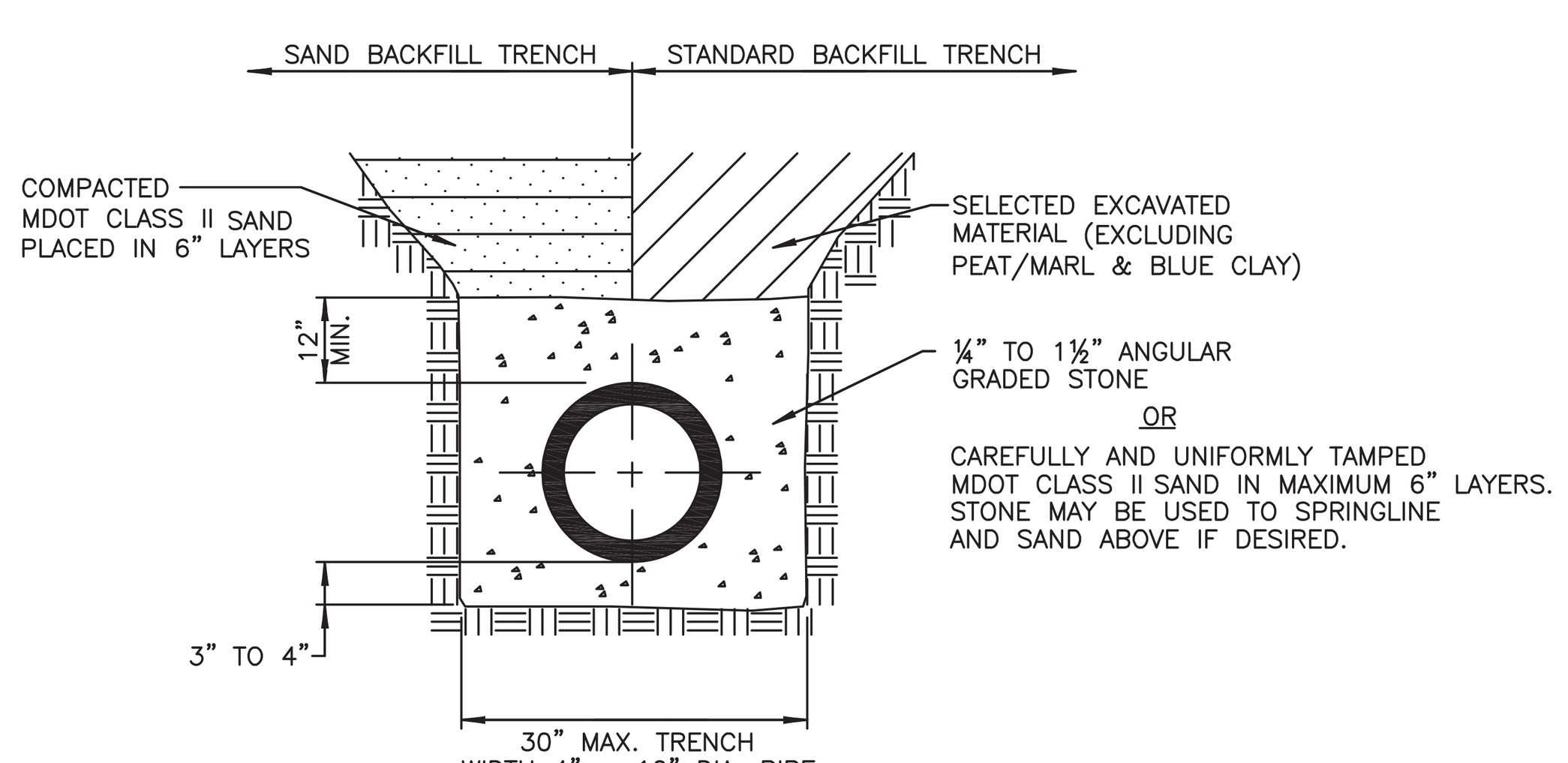
NO SCALE



EAST JORDAN IRON WORKS OR APPROVED EQUAL
HEAVY DUTY MATERIAL ASTM A48 CL.35B
CATALOG NO. 1040A
PATTERN NO. 1040A, PRODUCT NO. 104718 OAKCOSTD.
2" HIGH RAISED LETTERS, 1" WIDE RAISED LETTERS
ALL IN RECESSED POCKET.

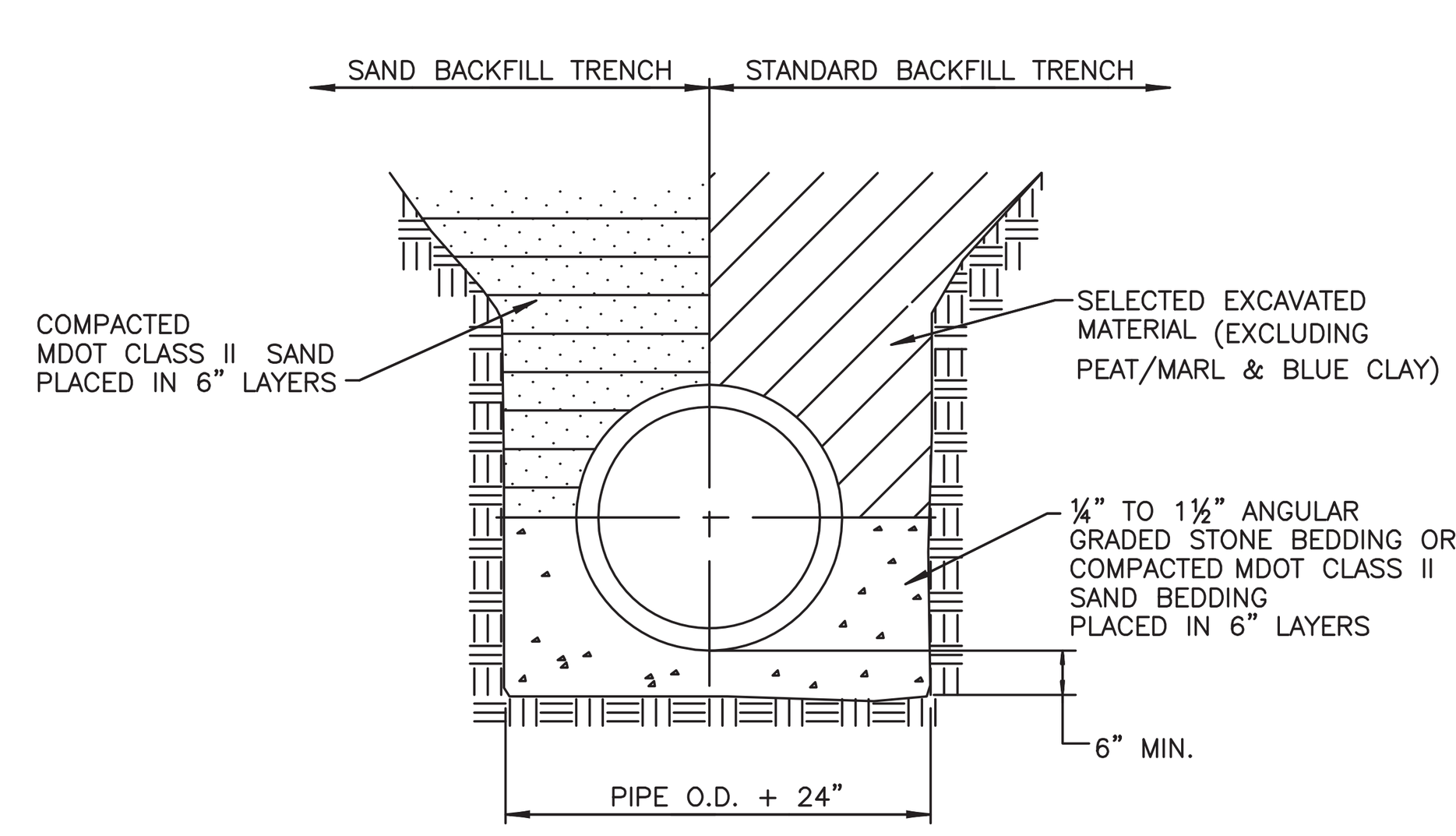
LETTERED MANHOLE COVER FOR WRC

NO SCALE



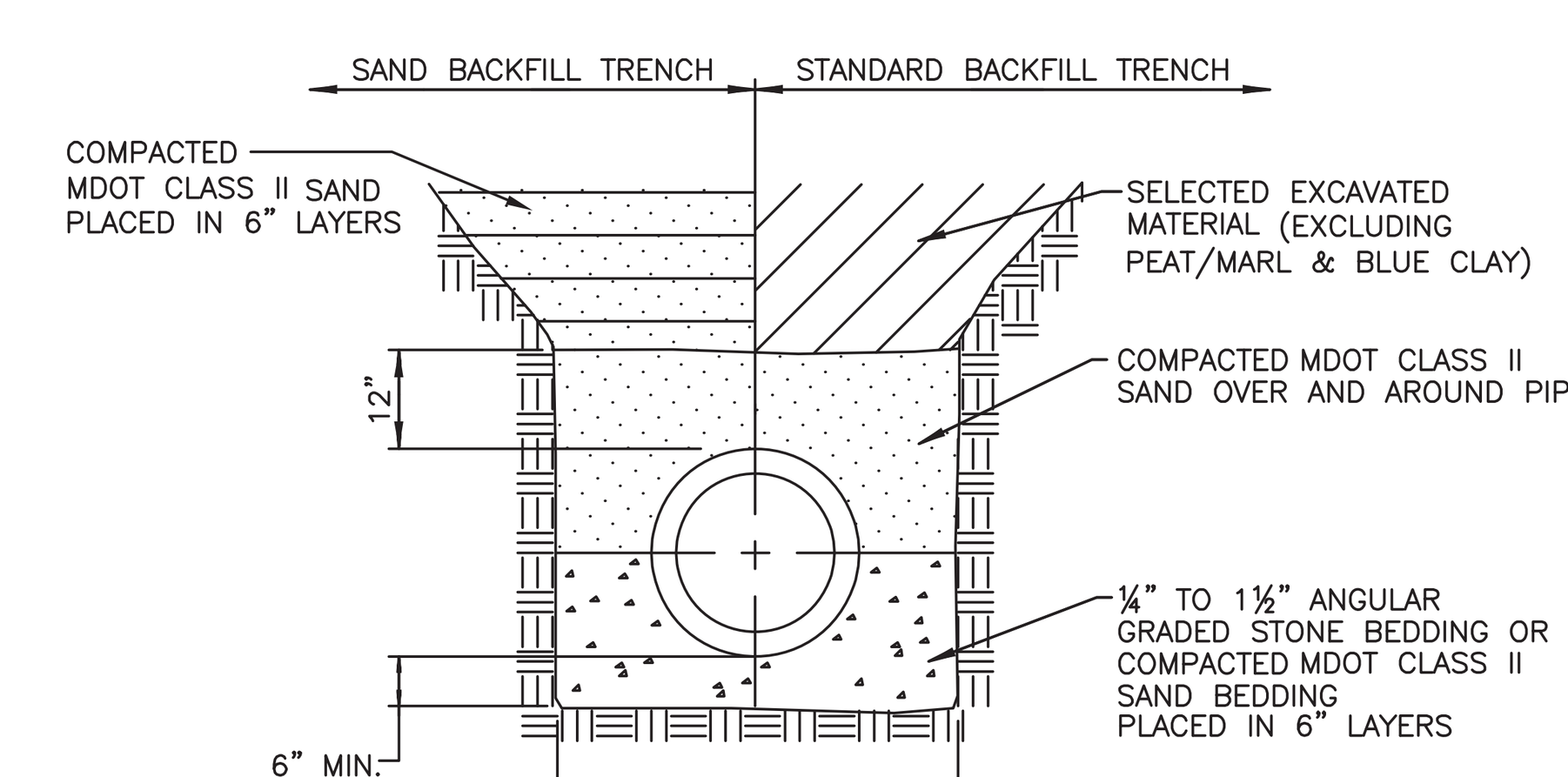
ABS (TRUSS AND SOLID WALL), PVC (TRUSS, SOLID WALL, A2000), ADS N-12 WT PIPE BEDDING DETAIL

NO SCALE



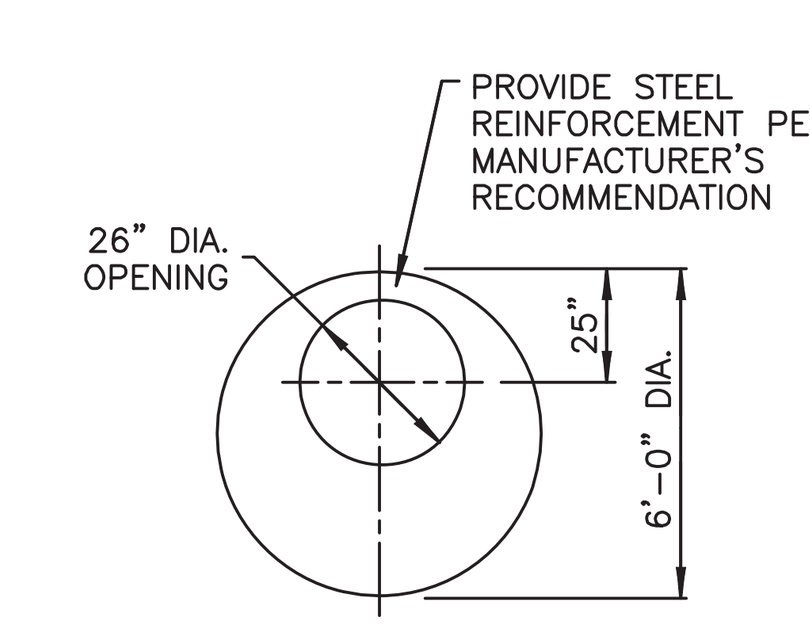
CLASS "B" BEDDING TRENCH DETAIL FOR 27" DIAMETER AND LARGER CONCRETE PIPE

NO SCALE



CLASS "B" BEDDING TRENCH DETAIL FOR 24" DIAMETER AND SMALLER CONCRETE PIPE

NO SCALE



PRECAST CONCRETE TOP SLAB DETAIL

GENERAL NOTES

1. Type and class of pipe shall be as specified on plans.
2. Class "B" bedding shall be used throughout, unless otherwise specified on the plan.
3. All end sections 18" and larger shall be provided with a bar screen unless otherwise approved.
4. Standard rip-rap shall be 8"–15" fragmented rock, heavy rip-rap shall be 16"–24" fragmented rock. (No Broken Concrete)
5. MANHOLE REQUIREMENTS:
   - All new catch basins, inlets, and manholes are to be manufactured to ASTM C-478 specifications.
   - All new catch basins, inlets, and manholes shall have WRC approved flexible, watertight seals where pipes pass through walls. Manholes shall be of precast sections with modified groove tongue and rubber gasket type joints. Pre cast manhole cone sections shall be WRC approved modified eccentric cone type.
   - Taps through manhole joints or cone sections are prohibited unless otherwise approved.
   - Manhole steps to be plastic coated steel meeting the requirements in ASTM D 2146, Type II, Grade 49108, MA. Industries P.S.I. Polypropylene, (or approved equal). Steps to be installed during manhole manufacture. Place at 16" centers 45° from centerline of sewer.
   - Cone section with modified groove tongue joints and with stud inserts cast in place. Top to have flush surface.
   - ASTM C-478 riser section with modified groove tongue joints.
   - Res-seal, link-seal, press wedge II, or kor-n-seal boot (with stainless steel korband) flexible rubber manhole joints. (or approved equal).
   - The inside joints of manholes, catch basins, and pipe sizes over 42" and larger in diameter shall be pointed up with mortar upon completion of backfilling.
6. CONCRETE PIPE REQUIREMENTS:
   - Concrete pipe to be per ASTM C76 standards.
   - It will be required to TV all pipe 30 days after installation
   - The contractor shall provide reinforced concrete pipe as specified on the plans.
   - All reinforced concrete pipe shall have modified grooved tongue joints with o-ring type rubber gasket, per A.S.T.M. specifications C443.
   - The inside joints of manholes, catch basins, and pipe sizes over 42" and larger in diameter shall be pointed up with mortar upon completion of backfilling.
7. SUMP PUMP LEAD REQUIREMENTS:
   - All sump pump leads connected to a County Drain pipe shall be pre-manufactured.
   - Sump pump leads connected to a manhole shall be cored and booted. Refer to Kor-N-Tee Tap Detail.
   - Sump pump mains and leads shall be ABS (truss and solid wall), PVC (truss, solid wall , A2000), ADS N-12 WT with premium joints.
   - Ends of all 4" sump pump leads shall be temporarily capped and their location staked, witnessed and recorded.
   - All sump pump leads to be taken to the property line, easement line or as indicated on the plan.
   - Sump pump mains must have a cleanout with a minimum inside diameter of 24" and be constructed at changes of alignment, ends of sump pump mains or as indicated on the plan.
8. RESTORATION REQUIREMENTS:

   All disturbed area within the County Drain right-of-way shall be restored as follows:
   - Under roads, sidewalks, driveways and parking areas, backfill material shall be placed loosely into trenches in six (6) inch layers with each layer compacted to not less than 95% of maximum dry density as determined by the ASTM D 1557 Compaction Standard (modified proctor compaction test). All other areas shall have each layer compacted to not less than 90% of maximum dry density.
   - Finish subgrade
   - Place 3" thickness clean topsoil acceptable to the engineer to attain finished grade. Topsoil must not be contaminated and may not be a mixture of natural underlying soils, subbase materials, or other materials. It must consist of natural loam, sandy loam, silty loam or clay loam humus-bearing soil adapted to the sustenance of plant life. Topsoil must be neither excessively acidic nor excessively alkaline. It must be of mineral origin, exclusive of any peat or muck.
   - Apply seed and fertilizer as follows:*

Location	Seeding Requirements	Fertilizer Requirement
Slopes and Ditch, Banks, Etc.	M.D.O.T. "Roadside Mix" Turf Seed Mixture TGM (10% Kentucky Blue, 20% Perennial Rye, 30% Hard Fescue, 40% Creeping Red Fescue) applied at 220 lb/acre	M.D.O.T. Seeding and Sodding Fertilizers, Class A
Other Areas	M.D.O.T. "Roadside Mix" Turf Seed Mixture THM (30% Kentucky Blue, 20% Perennial Rye, 50% Creeping Red Fescue) applied at 220 lb/acre	M.D.O.T. Seeding and Sodding Fertilizers, Class A

   * Sod is required in maintained lawn areas. Refer to WRC General Specifications for additional requirements and information.
   - apply straw or marsh hay mulch in an air-dry condition to all seeded areas over the surface to a uniform thickness at 2 tons/acre.
   - mulch shall be anchored in place with biodegradable netting, not larger than 1½" by 2" nor smaller than ½" by ½".
   - The contractor shall be responsible to insure the growth of all seeded areas, and shall re-seed as necessary to accomplish this.
9. The Storm Drain Notes and Details Sheet shall be a supplement to WRC Standards and Specifications, which are available on the WRC website (www.oakgov.com/water).

Plotfile Name: GISQtrs.ctb
File Location: J:\Drain\MappingUnit\STANDARD\DETAILS\AppProduction\Standard\StormDrain\Std-Stm.dwg

STORM DRAIN NOTES AND DETAILS

REVISION BLOCK

Data Source / Source Date: N/A

Rev. No.:	Rev. By:	Rev. Date:	Description:
1	lz	3/17/09	PROPOSED DETAIL CHANGES / NEW LOGO
2	lz	06/12/09	APPROVAL PER STANDARDS COMMITTEE
3	lz	03/29/10	REVISED MH COVER DETAIL
4	DS	04/27/10	REVISED GENERAL NOTES

ORIG. DATE:	05/05/97
SCALE:	NONE
DESIGNED BY:	WRC
DRAWN BY:	Mapping

WRC WATER RESOURCES COMMISSIONER Jim Nash

ONE PUBLIC WORKS DRIVE, BLDG 95 WEST
WATERFORD, MICHIGAN
48328-1907

SHEET NO.: 1 of 1

COMBINED PARCEL DESCRIPTION:
PROPERTY LOCATED IN SECTION 7, T.1N., R.11E., THE CITY OF BERKLEY, COUNTY OF OAKLAND, STATE OF MICHIGAN:

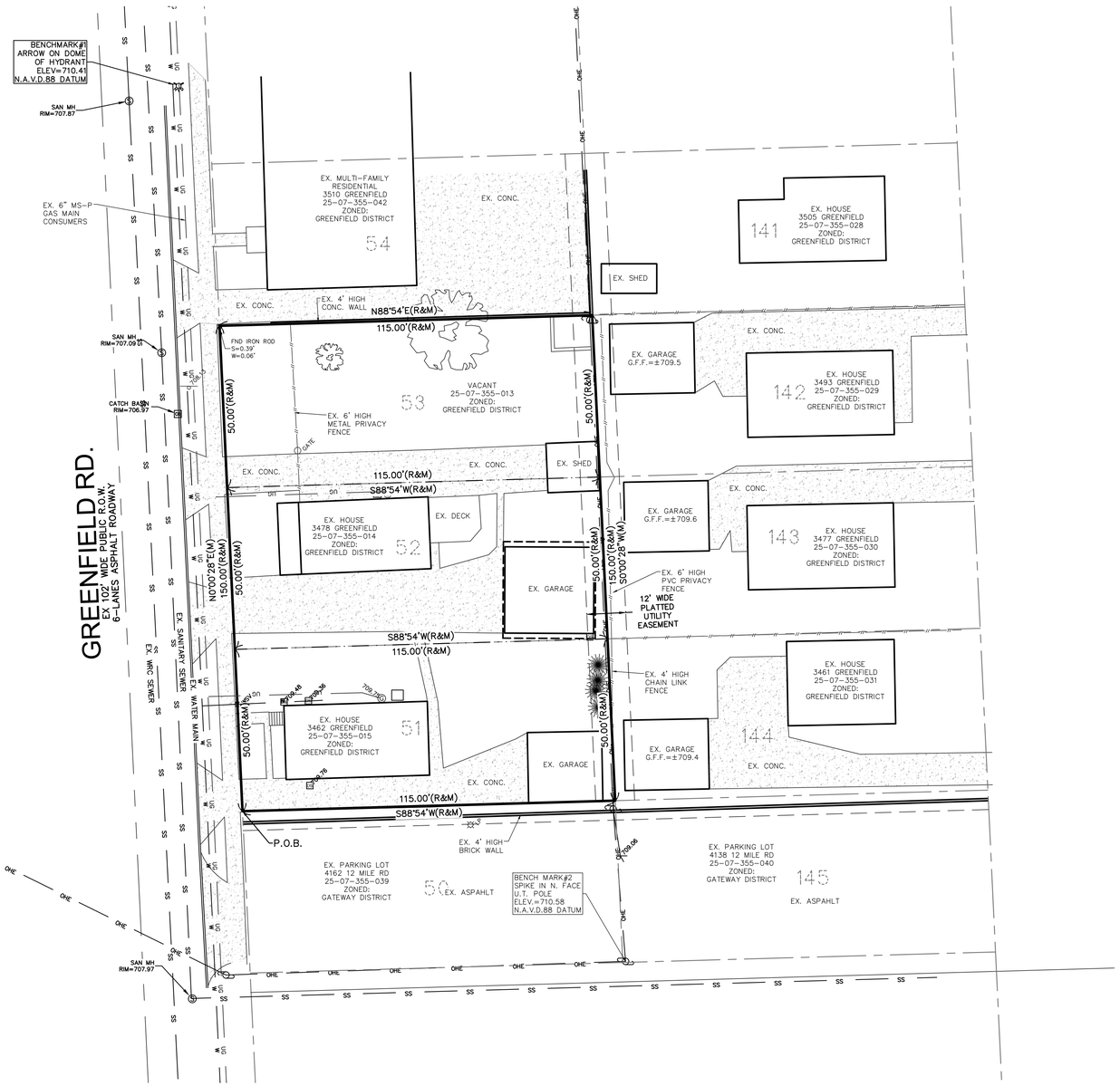
ALL OF LOTS 51–53 ELLWOOD HEIGHTS SUBDIVISION AS RECORDED IN LIBER 23 OF PLATS, PAGE 19, OAKLAND COUNTY RECORDS ALSO DESCRIBED AS; COMMENCING AT THE SOUTHWEST CORNER OF LOT 51; THENCE NORTH 00 DEGREES 00 MINUTES 28 SECONDS EAST 150.00 FEET TO THE NORTHWEST CORNER OF LOT 53; THENCE ALONG THE NORTH LINE OF LOT 53 NORTH 88 DEGREES 54 MINUTES EAST 115.00 FEET TO THE NORTHEAST CORNER OF SAID LOT 53; THENCE SOUTH 00 DEGREES 00 MINUTES 28 SECONDS WEST 150.00 FEET TO THE SOUTHEAST CORNER OF LOT 51; THENCE ALONG THE SOUTH LINE OF LOT 51 SOUTH 88 DEGREES 54 MINUTES WEST 115.00 FEET TO THE POINT OF BEGINNING. CONTAINING ±0.396 ACRES MORE OR LESS.

NOTES:

BASIS OF BEARING: RIGHT OF WAY AND LOT LINE BEARINGS AND DISTANCES WERE TAKEN FROM THE ELLWOOD HEIGHTS SUBDIVISION AS RECORDED IN LIBER 23 OF PLATS, PAGES 19, CITY OF BERKLEY, OAKLAND COUNTY, MICHIGAN.

(M) FIELD MEASURED BEARINGS AND DISTANCES REQUIRED TO FORCE PROPER CLOSURE OF DESCRIPTION
(R) RECORDED BEARINGS AND DISTANCES PER SUBDIVISION PLAT.

NORTH



LEGEND

SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION
× 656.5	EX. SPOT ELEVATION	OHC	EX. OVERHEAD CABLE
652	EX. CONTOUR	OHF	EX. OVERHEAD FIBER
	EX. ℄ DITCH	OHE	EX. OVERHEAD ELECTRIC
	EX. GRAVEL	UC	EX. UNDERGROUND CABLE
W	EX. WATER MAIN	C	EX. COMMUNICATION RISER
WV	EX. WATER VALVE	CH	EX. COMMUNICATION HANDHOLE
WSV	EX. WATER SERVICE VALVE		EX. UTILITY POLE
WH	EX. HYDRANT		EX. GUY ANCHOR
WM	EX. WATER MANHOLE		EX. SIGNAL POLE
WV	EX. WATER GV		EX. LIGHT POLE
W	EX. WATER METER		EX. GROUND LIGHT
ST	EX. STORM SEWER		EX. DOUBLE LIGHT POLE
SI	EX. STORM INLET/CATCH BASIN		EX. SINGLE POLE SIGN
SB	EX. ROUND STORM CATCH BASIN		EX. DOUBLE POLE SIGN
SM	EX. STORM MANHOLE	MB	EX. MAILBOX
	EX. STORM END SECTION		EX. FLAGPOLE
SD	EX. DOWN SPOUT		EX. SPEAKER
SS	EX. SANITARY SEWER	U	EX. UNKNOWN MANHOLE
SM	EX. SANITARY MANHOLE	C	EX. COMBO MANHOLE
SO	EX. CLEAN OUT		EX. SECTION LINE
SV	EX. SANITARY VENT		EX. PARCELS
UG	EX. UNDERGROUND GAS		EX. EASEMENT
GV	EX. GAS VALVE		EX. CENTERLINE
G	EX. GAS METER		EX. WETLAND LIMITS
UT	EX. UNDERGROUND TELEPHONE		EX. CURB/PAVEMENT
UF	EX. UNDERGROUND FIBER OPTIC	//	EX. FENCE
T	EX. TELEPHONE MANHOLE		EX. GUARDRAIL
TR	EX. TELEPHONE RISER	I	FOUND IRON
TH	EX. TELEPHONE HANDHOLE	I-RR	FOUND RR SPIKE
UE	EX. UNDERGROUND ELECTRIC	I-NAIL	FOUND PK NAIL
E	EX. ELECTRIC MANHOLE		FOUND CONC. MONUMENT
ER	EX. ELECTRIC RISER	S	SET IRON ROD
EH	EX. ELECTRIC HANDHOLE	S-NAIL	SET MAG NAIL
ET	EX. ELECTRIC TRANSFORMER		SECTION CORNER
EM	EX. ELECTRIC METER		POST
GEN	EX. GENERATOR	BOL	BOLLARD
	EX. ASPHALT	{R}	RECORDED BEARING
	EX. CONCRETE	{M}	MEASURED BEARING
	EX. GRAVEL		EX. TREE
	EX. TREELINE		DEMO TREE
	EX. WATER MARKER		
	EX. GAS MARKER		
	EX. COMM. MARKER		
	EX. TELE. MARKER		
	EX. FIBER MARKER		
	EX. MEDIA MARKER		

CONSTRUCTION SITE SAFETY IS THE RESPONSIBILITY OF THE CONTRACTOR. NEITHER THE OWNER NOR THE ENGINEER SHALL BE EXPECTED TO ASSUME ANY RESPONSIBILITY FOR SAFETY OF THE WORK, OF PERSONS ENGAGED IN THE WORK, OF ANY NEARBY STRUCTURES, OR OF ANY OTHER PERSONS.

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THE LOCATIONS OF EXISTING UNDERGROUND UTILITIES ARE SHOWN IN AN APPROXIMATE WAY ONLY AND HAVE NOT BEEN INDEPENDENTLY VERIFIED BY THE OWNER OR ITS REPRESENTATIVE. THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION OF ALL EXISTING UTILITIES BEFORE COMMENCING WORK, AND AGREES TO BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES WHICH MIGHT BE OCCASIONED BY THE CONTRACTOR'S FAILURE TO EXACTLY LOCATE AND PRESERVE ANY AND ALL UNDERGROUND UTILITIES.

811 Know what's below. Call before you dig.

UNDERGROUND UTILITY LOCATIONS AS SHOWN ON THE PLAN, WERE OBTAINED FROM UTILITY OWNER AND NOT FIELD LOCATED.

811 Know what's below. Call before you dig.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROTECTION OF AND/OR RELOCATION OF ALL UTILITIES THAT MAY INTERFERE WITH CONSTRUCTION.

John Blanchard, Professional Surveyor
PS#40010274446

I HEREBY CERTIFY THAT I HAVE LOCATED AND MAPPED THE LAND HEREON PLATTED AND/OR DESCRIBED, ON THE DATE NOTED HEREON, THAT I HAVE COMPLIED WITH THE REQUIREMENTS OF ACT 132, P.A. OF 1970 AND THAT THE ERROR OF CLOSURE OF THE UNADJUSTED FIELD OBSERVATION IS WITHIN THE LIMITS ESTABLISHED FOR THE PROFESSION.

SEAL

STATE OF MICHIGAN
JOHN S. BLANCHARD
PROFESSIONAL SURVEYOR
No. 27446
REGISTERED PROFESSIONAL SURVEYOR

Civil Engineering
Landscape Architecture
Land Surveying
Construction Services
DIFFIN
Engineering & Surveying
24353 Tara Drive
South Lyon, MI 48178
P: 248.943.8244
F: 248.378.2564
www.Diffin-Eng.com

REVISIONS
ADDED UTILITY DATA AND EASEMENTS 6-29-21
REV. PER CITY'S 8-31-21 COMMENTS

CLIENT:
ORMAN ENGINEERING
5476 VIVIAN LANE
WATERFORD, MICHIGAN 48327

TOPOGRAPHIC | BOUNDARY SURVEY
3462 & 3478 GREENFIELD

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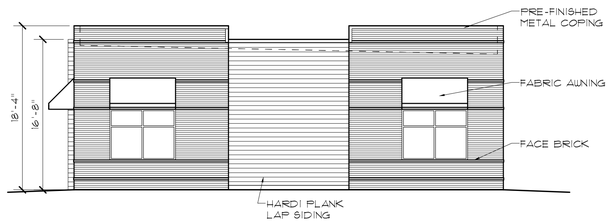
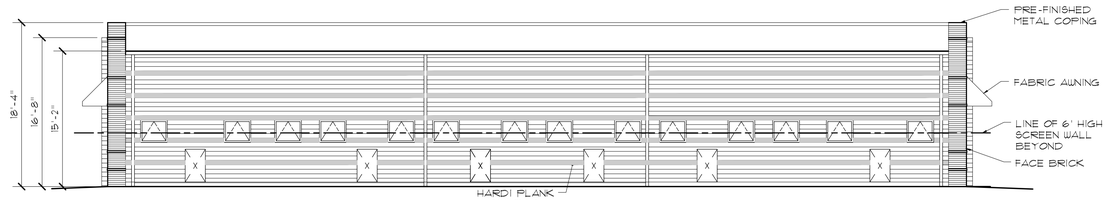
SECTION 7
TOWN 1 NORTH, RANGE 11 EAST
CITY OF BERKLEY
OAKLAND COUNTY, MICHIGAN

DATE: 9-8-21
Drawn By: XX
P.E.: MD
1" = 30'
Job No.: 210519
Sheet No.
1

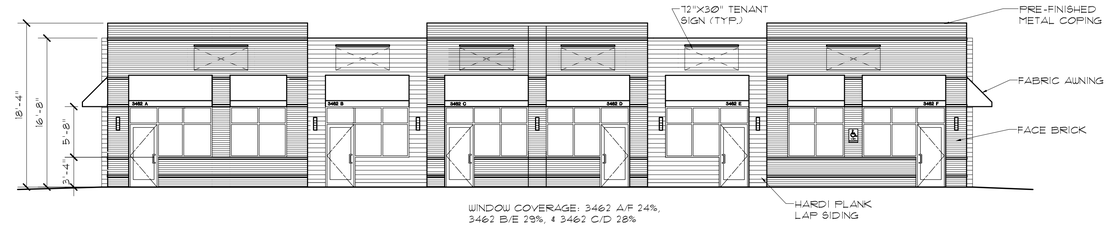
C:\DES\ORMAN ENGINEERING\2021\3462-3478 GREENFIELD - BERKLEY\LOT COMBO EXHIBIT.DWG



(NORTH OPPOSITE HAND)
SOUTH ELEVATION
SCALE: 1/8"=1'-0"

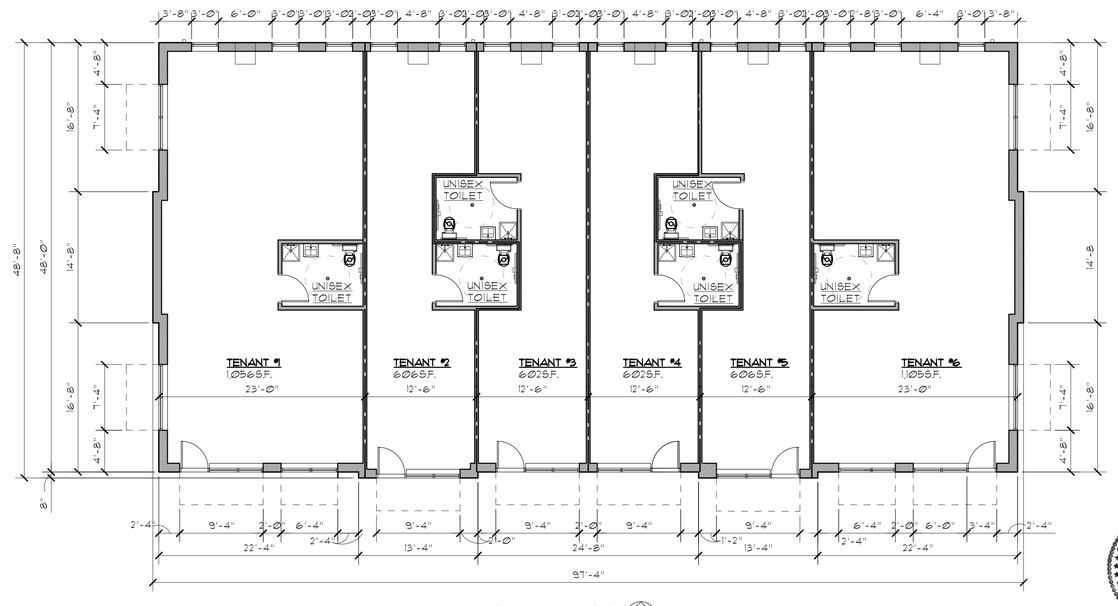


EAST ELEVATION
SCALE: 1/8"=1'-0"



WINDOW COVERAGE: 3462 A/F 24%, 3462 B/E 29%, & 3462 C/D 28%

WEST ELEVATION
SCALE: 1/8"=1'-0"



FLOOR PLAN
SCALE: 1/8"=1'-0"

NORTH

STATE OF MICHIGAN
TIMOTHY JAY FOUGHT
ARCHITECT
No. 1301056975
LICENSED ARCHITECT

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PROJECT
SPEC OFFICE SPACE
3462 3478 GREENFIELD RD
BERKLEY, MI

SUBJECT
FLOOR PLAN & EXTERIOR ELEVATIONS

ARCHITECTS
T. FOUGHT & ASSOCIATES LLC
24045 WOODLAND DR, SOUTHFIELD, MI 48034
(248) 514-7612

ISSUED:
SITE PLAN APPROVAL
09/24/2021
01/21/2021

DRAWN	T.J.F.
CHECKED	T.J.F.
APPROVED	T.J.F.
BIDS	
CONSTR.	

DO NOT SCALE PRINTS - USE FIGURED DIMENSIONS ONLY

JOB NO.
T2021024

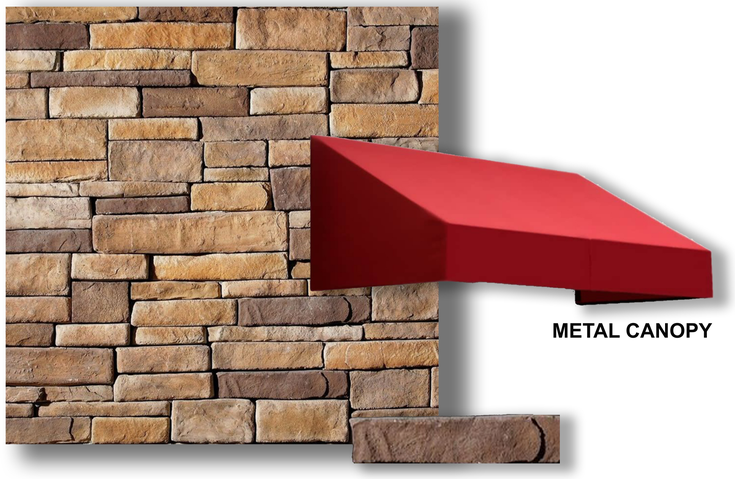
SHEET
A.1

34 GREENFIELD OFFICE



CEMENT FIBERBOARD SIDING
HARDIE PLANK
WHITE WITH SMOOTH FINISH

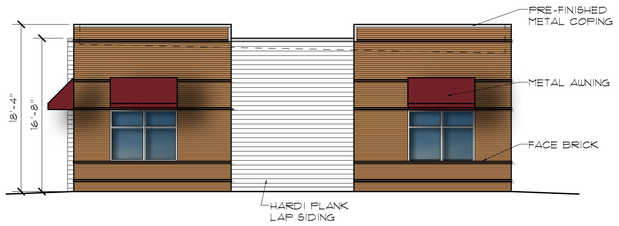
CEMENT FIBERBOARD SIDING
HARDIE PLANK
GREY WITH SMOOTH FINISH



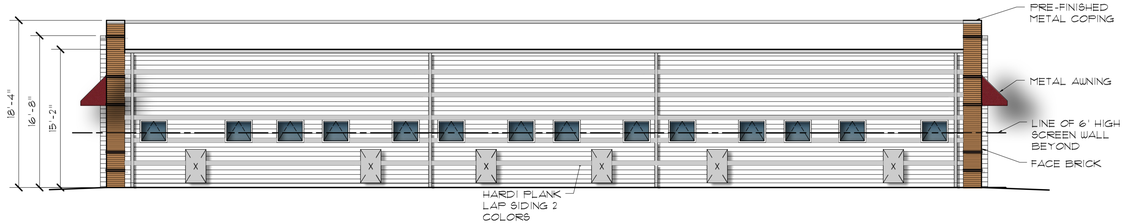
STACKED STONE VENEER

STONE TRIM

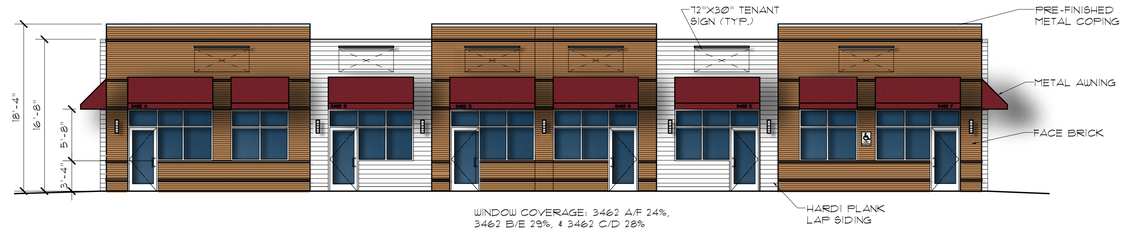
METAL CANOPY



(NORTH OPPOSITE HAND)
SOUTH ELEVATION
SCALE: 1/8"=1'-0"

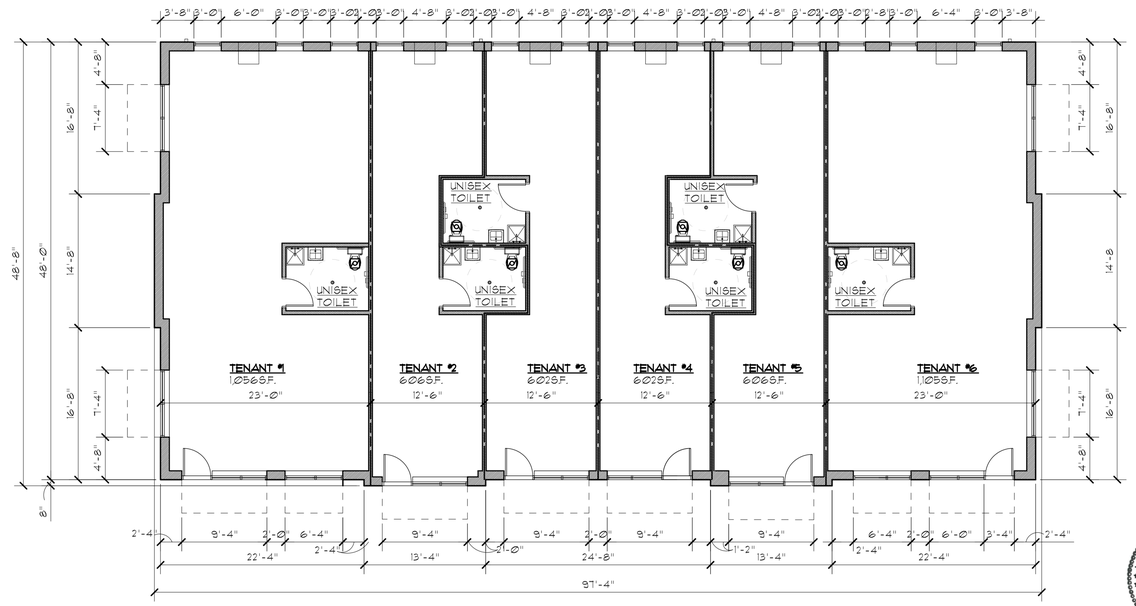


EAST ELEVATION
SCALE: 1/8"=1'-0"



WINDOW COVERAGE: 3462 A/F 24%, 3462 B/E 29%, & 3462 C/D 28%

WEST ELEVATION
SCALE: 1/8"=1'-0"



FLOOR PLAN
SCALE: 1/8"=1'-0"

NORTH

STATE OF MICHIGAN
TIMOTHY JAY FOUGHT
ARCHITECT
No. 1301056975
LICENSED ARCHITECT

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PROJECT
SPEC OFFICE SPACE
3462 3478 GREENFIELD RD
BERKLEY, MI

SUBJECT
FLOOR PLAN & EXTERIOR ELEVATIONS

ARCHITECTS
T. FOUGHT & ASSOCIATES LLC
24045 WOODLAND DR. SOUTHFIELD, MI 48034
(248) 514-7612

ISSUED:
SITE PLAN APPROVAL 09/24/2021
01/21/2021

DRAWN T.J.F.
CHECKED T.J.F.
APPROVED T.J.F.
BDS
CONSTR

DO NOT SCALE PRINTS - USE FIGURED DIMENSIONS ONLY

JOB NO.
T2021024

SHEET
A.2

34 GREENFIELD OFFICE

MINW-LED

Construction:
- Housing and chassis is steel
- Diffuser is .10 extruded white acrylic
- Accent bars and rings are extruded aluminum

Light Source:
- LED
- Dimming to 10% **Included**

Notes:
- Integral mounting plate; keyhole slots left and right
- Top and bottom white acrylic lens – standard
- Not all material and accent styles are available
- Optional lens cover (ALC) eliminates up/down light
- Optional photocell (21) increases fixture depth 1 ½"
- BUG Rating: B0 - U3 - G2
- UL and CUL listed **WET** location
- LED Components
  - Replaceable Module
  - CRI > 80
  - Universal 120/277 volt standard
  - 5-Year Warranty on LED ComponentsComponents

Type:	L1
Job Name:	

L1



MINW
Height - 16" - 20" - 26" - 38" - 50"
Width - 9"
Depth - 4"
MC - 8" - 10" - 13" - 19" - 25"

DIMMABLE · CUL LISTED · MADE IN AMERICA

ORDERING INFORMATION

Example: MINW-920-LED-O2C-4-B-Z3-WSA

MINW [ ] [ ] [ ] [ ] [ ] [ ] [ ]

Size	LED	Watts	Source Lumens	Dimming	Energy Star
916-LED	F1E	15	2347	DIM or DIMLD	NO
	O2C	18	2420	0-10v	NO
920-LED	O2C	18	2420	0-10v	NO
	O4B	29	4000	0-10v	NO
926-LED	O2C	18	2420	0-10v	NO
	O4C	36	4840	0-10v	NO
938-LED	O3C	27	3630	0-10v	NO
	O6C	54	7260	0-10v	NO
950-LED	O4C29	29	3412	0-10v	NO
	O4C	36	4840	0-10v	NO
	O8C	72	9680	0-10v	NO

Kelvin: **2** 3000K; **4** 4000K; *Optional* **3** 3500K

Cage: **A** **B** **C** **D** **X**

Finish: **B1** Satin Black; **Z1** Satin Bronze; **Z3** Text Bronze; **W1** Yolk; **W2** Gloss White; **W3** Text White; **B2** Text Black; **T4** Shimmer Gray; **M13** Anod Silver; **T6** Pewter; **W13** Pearl Beige; *Optional* (See Price List) **P2** Brushed Alum; **P9** Brushed Nickel; **M16** Antique Brass

Diffuser: **WSA** White Smooth Acrylic; **Optional Cage Accents** (See Page 2); **Material**: **F** Filigree; **P** Perforated Screen; **M** Wire Mesh; **W** Waffle Pattern; **Style**: **SC** Screen Complete; **CC** Center Complete; **CH** Center Half; **EC** Ends Complete; **SF** Sides Full; **CF** Center Full; **OX** Custom

Options: **DIM** LED dimming driver (0 - 10v) Dimming to 10% (**Included**); **21** Photocell - Spedify voltage (01 - 120 volt, 02 - 277 volt); **42** All Aluminum Construction; **ALC** Aluminum Lens Cover - *See Notes*; **Battery Backup Options** *(Available with 0-10v only)*: **BB10** 10 Watts (1170lm) for 90-Minutes

28435 Industry Drive., Valencia, California 91355
West Coast Sales: 800-325-4448 /661-257-0286• fax 800-323-2346 /661-257-0201
East Coast Sales: 866-350-0991 • fax 866-490-5754
www.lightwayind.com • sales@lightwayind.com

Lightway

Revision: 05/11/2021

Statistics

Description	Symbol	Avg	Max	Min	Avg/Min	Max/Min
Grade	+	0.1 fc	1.3 fc	0.0 fc	N/A	N/A
Sidewalk	+	0.9 fc	1.6 fc	0.4 fc	2.3:1	4.0:1

Schedule

Symbol	Label	Quantity	Manufacturer	Catalog Number	Description	Lamp	Lumens Per Lamp	Light Loss Factor	Wattage
▭	L1	7	LIGHTWAY INDUSTRIES, INC	MINW-916-LED-U-11W	4"L. X 9"W. X 16"H. LED WALL SCONCE DIFFUSED LENS	LED	1045	0.9	12.5

General Note
1. SEE SCHEDULE FOR LUMINAIRE MOUNTING HEIGHT.
2. CALCULATIONS ARE SHOWN IN FOOTCANDLES AT: 0' - 0"
3. LIGHTING ALTERNATES REQUIRE NEW PHOTOMETRIC CALCULATION AND RESUBMISSION TO CITY FOR APPROVAL.

THE ENGINEER AND/OR ARCHITECT MUST DETERMINE APPLICABILITY OF THE LAYOUT TO EXISTING / FUTURE FIELD CONDITIONS. THIS LIGHTING LAYOUT REPRESENTS ILLUMINATION LEVELS CALCULATED FROM LABORATORY DATA TAKEN UNDER CONTROLLED CONDITIONS IN ACCORDANCE WITH ILLUMINATING ENGINEERING SOCIETY APPROVED METHODS. ACTUAL PERFORMANCE OF ANY MANUFACTURER'S LUMINAIRE MAY VARY DUE TO VARIATION IN ELECTRICAL VOLTAGE, TOLERANCE IN LAMPS, AND OTHER VARIABLE FIELD CONDITIONS. MOUNTING HEIGHTS INDICATED ARE FROM GRADE AND/OR FLOOR UP.

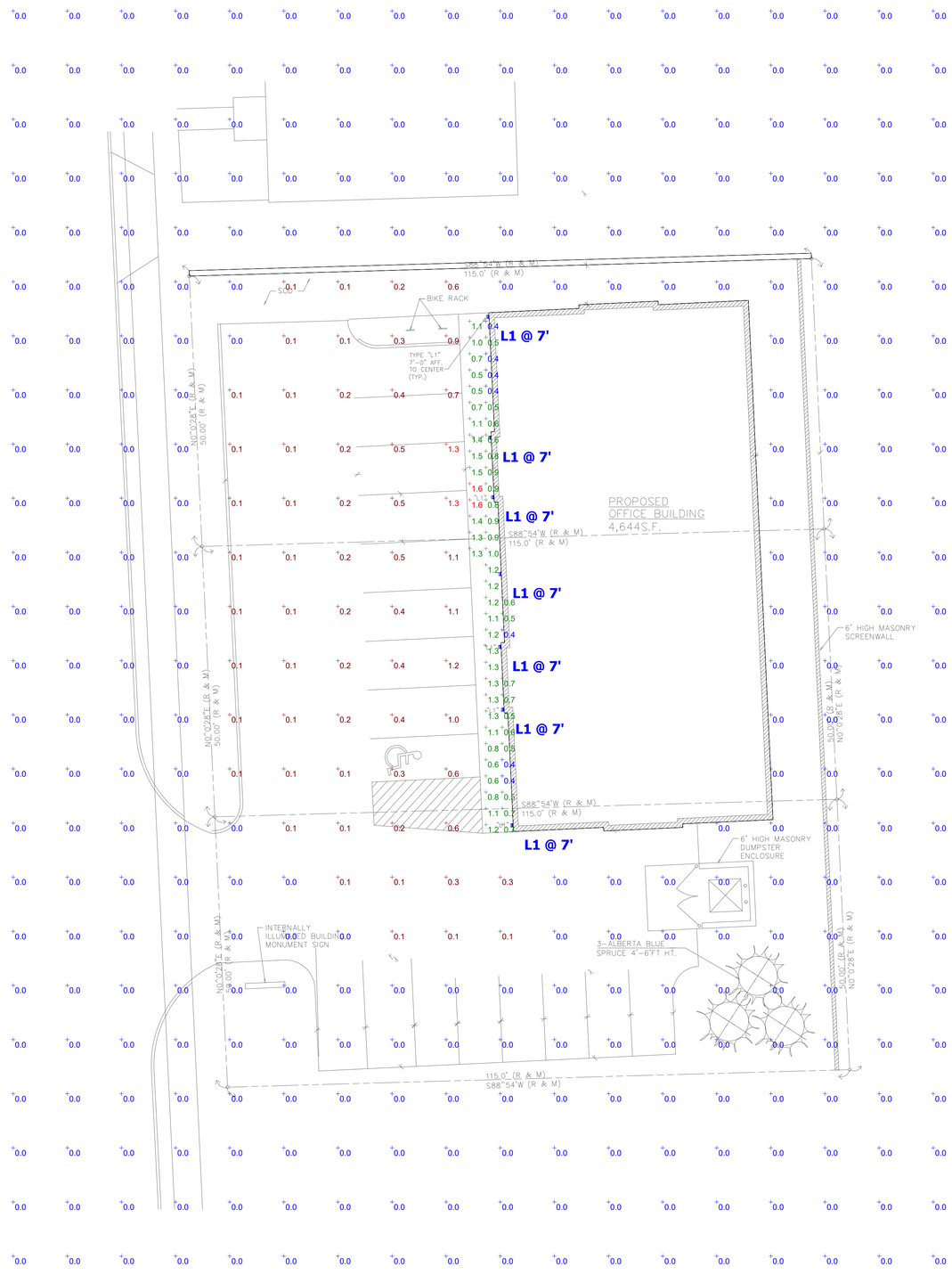
THESE LIGHTING CALCULATIONS ARE NOT A SUBSTITUTE FOR INDEPENDENT ENGINEERING ANALYSIS OF LIGHTING SYSTEM SUITABILITY AND SAFETY. THE ENGINEER AND/OR ARCHITECT IS RESPONSIBLE TO REVIEW FOR MICHIGAN ENERGY CODE AND LIGHTING QUALITY COMPLIANCE.

UNLESS EXEMPT, PROJECT MUST COMPLY WITH LIGHTING CONTROLS REQUIRMENTS DEFINED IN ASHRAE 90.1 2013. FOR SPECIFIC INFORMATION CONTACT GBA CONTROLS GROUP AT ASG@GASSERBUSH.COM OR 734-266-6705.

FOR ORDERING INQUIRIES CONTACT GASSER BUSH AT QUOTES@GASSERBUSH.COM OR 734-266-6705.

THIS DRAWING WAS GENERATED FROM AN ELECTRONIC IMAGE FOR ESTIMATION PURPOSE ONLY. LAYOUT TO BE VERIFIED IN FIELD BY OTHERS.

MOUNTING HEIGHT IS MEASURED FROM GRADE TO FACE OF FIXTURE. POLE HEIGHT SHOULD BE CALCULATED AS THE MOUNTING HEIGHT LESS BASE HEIGHT.



Plan View
Scale - 1" = 12ft

3478 - 3488 GREENFIELD RD.
PHOTOMETRIC PLAN
GASSER BUSH ASSOCIATES
WWW.GASSERBUSH.COM

Designer DS/KB
Date 08/31/2021 re. 11/18/2021
Scale Not to Scale
Drawing No. #21-66065 V2
1 of 1

Exhibit "A"

PROPERTY LEGAL DESCRIPTION:

PROPERTY LOCATED IN THE CITY OF BERKLEY, COUNTY OF OAKLAND, STATE OF MICHIGAN:

3462 GREENFIELD RD
Tax ID# 25-07-255-015
T1N, R11E, SEC 7 ELLWOOD HEIGHTS LOT 51

3478 GREENFIELD RD
Tax ID# 25-07-255-014
T1N, R11E, SEC 7 ELLWOOD HEIGHTS LOT 52

3478 GREENFIELD RD
Tax ID# 25-07-255-013
T1N, R11E, SEC 7 ELLWOOD HEIGHTS LOT 53

REVISED: 12-01-2021 PER CITY

PROJECT:	PROPERTY OWNER:	ENGINEER:	DATE: 11/01/2021
Proposed Office Building **3462 & 3478 Greenfield** **Berkley, MI 48072**	**North Green Trust** **1359 Davis Ave.** **Birmingham, MI 48009** **Dan Winter** **Cell: (313) 909-6800** **Email:** **primemangement@tir.com**	Orman Engineering LLC 5476 Vivian Lane Waterford, MI 48327 Phone: 248.682-6001 Fax: 248.682-6001	SHEEET 1 OF 1

EXHIBIT "C" - STORM WATER MANAGEMENT SYSTEM LONG-TERM MAINTENANCE PLAN

TABLE 1
STORM WATER MANAGEMENT SYSTEM LONG-TERM MAINTENANCE SCHEDULE

MAINTENANCE ACTIVITIES	SYSTEM COMPONENTS: Storm Collection System (Sewers, Swales, Catch Basins, Manholes)	Manufactured Treatment System	Underground Detention System	Flow Restrictor Structure & Outlet Pipe	Pavement Areas		FREQUENCY
Monitoring/Inspection							
Inspect for Sediment Accumulation/Clogging	X	X	X	X	X		Annually
Inspect For Floatables, Dead Vegetation & Debris	X	X	X	X	X		Annually & After Major Events
Inspect For Erosion And Integrity of System	X				X		Annually & After Major Events
Inspect All Components During Wet weather & Compare	X	X	X	X	X		Annually
Ensure Maintenance Access Remain Open/Clear	X	X	X	X	X		Annually
Preventative Maintenance							
Remove Accumulated sediments	X	X	X	X	X		As Needed (See Note Below)
Remove Floatables, Dead Vegetation & Debris	X				X		As Needed
Sweeping of Paved Surfaces					X		As Needed
Remedial Actions							
Repair/Stabilize Areas of Erosion	X				X		As Needed
Replace Dead Plantings & Reseed Bare Areas	X						As needed
Structural Repairs	X	X	X	X	X		As Needed
Make Adjustments/Repairs to Ensure Proper Functioning	X	X	X	X	X		As Needed

NOTE: Manufactured treatment system and underground detention system to be cleaned according to the manufacturer's recommendations; at a minimum, whenever sediments accumulate to a depth of 6-12 inches, or if sediment resuspension is observed.

REVISED: 12-01-2021 PER CITY

PROJECT:	PROPERTY OWNER:	ENGINEER:	DATE: 11/01/2021
Proposed Office Building **3462 & 3478 Greenfield** **Berkley, MI 48072**	**North Green Trust** **1359 Davis Ave.** **Birmingham, MI 48009** **Dan Winter** **Cell: (313) 909-6800** **Email:** **primemangement@tir.com**	Orman Engineering LLC 5476 Vivian Lane Waterford, MI 48327 Phone: 248.682-6001 Fax: 248.682-6001	SHEEET 1 OF 1

CITY OF BERKLEY
COMMUNITY DEVELOPMENT
3338 COOLIDGE HWY, BERKLEY, MICHIGAN 48072

MEMORANDUM

TO: Berkley Planning Commission

FROM: Megan Masson-Minock; Interim Community Development Director

SUBJECT: **PSP-03-21; 3462 – 3478 Greenfield Rd – New Construction of Office Building**
Site Plan Approval
Plan Date: January 21, 2022

DATE: February 18, 2022

Attached are the following reviews for the site plan submitted:

Planning Review from Carlisle Wortman Associates (CWA) dated January 28, 2022

CWA recommended approval of the site plan with the following conditions:

1. Confirm transparency.
2. Applicant considers additional landscaping.
3. Indicate location stone veneer.
4. Applicant shall show exterior appliances (air conditioners, generators, etc.) on site plan to ensure compliance with Sec. 138-73.

Engineering Review from Hubbell, Roth & Clark (HRC) dated February 8, 2022

HRC recommended approval of the site plan with subject to the applicant addressing the sanitary lead connection and obtaining and submitting copies of the geotechnical report which confirms the feasibility of the underground storm system for the site soils as well as any necessary permits.

Review for City of Berkley Department of Public Works (DPW) dated February 7, 2022

DPW had two comments and several items that need to be provided to the City prior to scheduling a preconstruction meeting. The Planning Commission should note the following:

1. DPW is requiring that the applicant have a licensed plumber video the existing laterals to accurately depict the connections on the plans. The applicant did note to “see attached supporting documents for this item” but DPW has been unable to locate this information.
2. It appears the applicant is proposing to re-utilize the existing 6” sanitary sewer tap at the southern property (see call out on sheet SP-2). A new tap must be made in a different location (existing sewer connections cannot be reused).
3. Greenfield Road is under the jurisdiction of RCOC. An RCOC permit must be provided to the City prior to the preconstruction meeting.
4. The parcel combination will need to be finalized with the Community Development Department with new Tax ID number identified.
5. A stormwater maintenance agreement shall be signed and finalized, prior to the preconstruction meeting.
6. A traffic control plan and sequence of construction shall be submitted to cover the ROW activities, prior to the preconstruction meeting.
7. A construction schedule shall be provided with dates and durations of all major work items, including final restoration, prior to the preconstruction meeting.

Please note that Fire Inspector Pete Kelly has signed and approved the site plan submitted.

Summary and Recommendation

The Planning Commission needs to make a determination on whether additional landscaping is needed.

We recommend the Planning Commission approve this site plan request with the following conditions:

1. RCOC approval.
2. Parcel combination finalized.
3. All issues in the following review letters are addressed:
    a. City Department of Public Works dated February 7, 2022
    b. Hubbell, Roth & Clark dated February 8, 2022
    c. Carlisle Wortman Associates dated January 28, 2022

Carlisle | Wortman
ASSOCIATES, INC.
117 NORTH FIRST STREET SUITE 70 ANN ARBOR, MI 48104 734.662.2200 734.662.1935 FAX

Date: January 28, 2022

Site Plan Review
For
City of Berkley, Michigan

Applicant: Green Trust

Project Name: 3462 – 3478 Greenfield Road

Plan Date: January 21, 2022

Location: 3462 – 3478 Greenfield Road

Zoning: Greenfield District

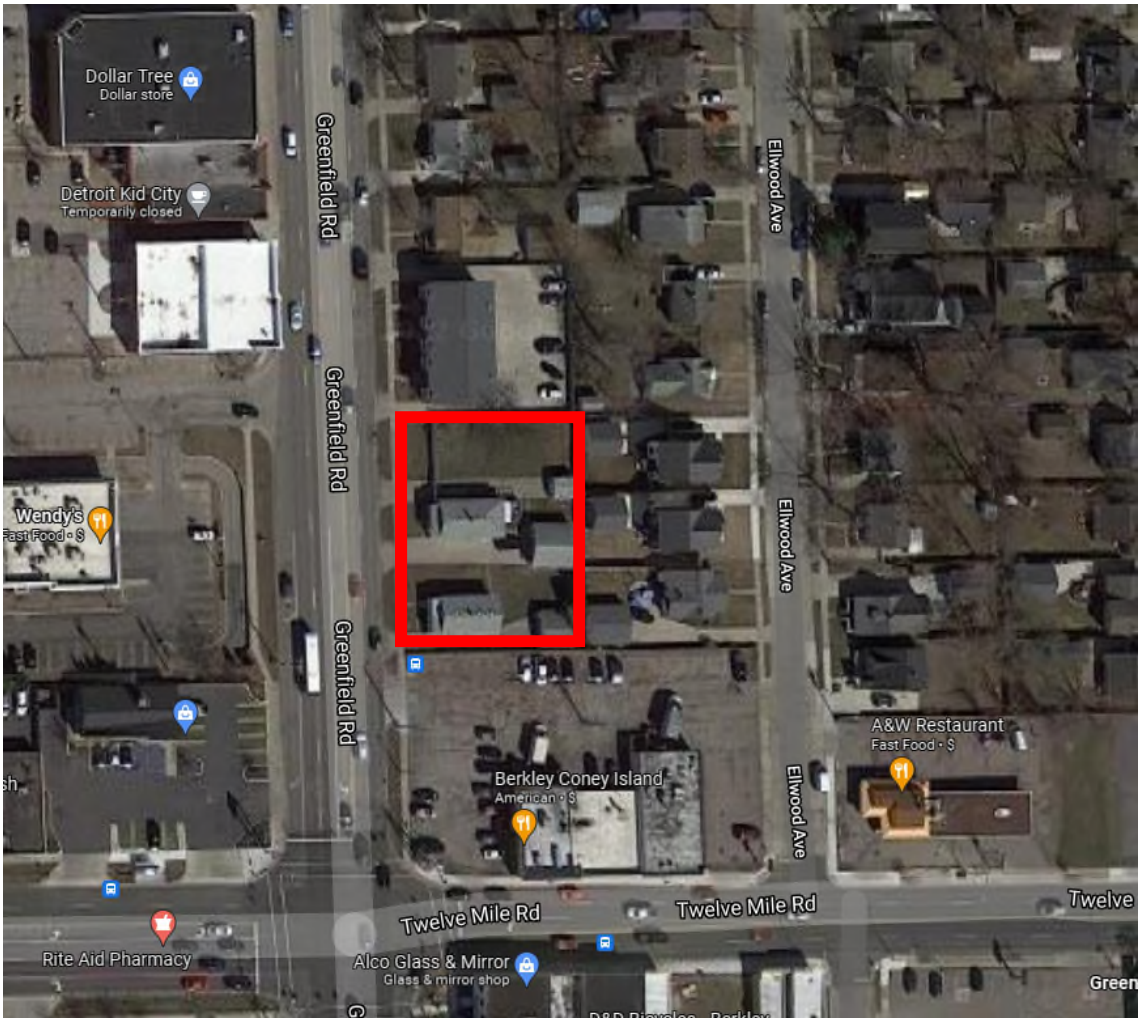
Action Requested: Site Plan Approval

SITE DESCRIPTION

The subject site is on the east side of Greenfield Road, just north of Twelve Mile Road. The applicant proposes to construct a 4,600 sq/ft speculative office building. The site is currently three (3) parcels, which include two (2) houses. Both homes will be demolished to accommodate the new building. The 0.40-acre site is zoned Greenfield District. Office is a permitted use in the Greenfield District.

Richard K. Carlisle, *President* Douglas J. Lewan, *Executive Vice President* John L. Enos, *Principal*
David Scurto, *Principal* Benjamin R. Carlisle, *Principal* Sally M. Elmiger, *Principal* Craig Strong, *Principal* R. Donald Wortman, *Principal*
Laura K. Kreps, *Associate* Paul Montagno, *Associate*

Site Location:



Proposed Uses of Subject Parcel:

A 4,600 sq/ft speculative office building

Current Use of Subject Property:

The subject property is currently two (2) single-family homes

Surrounding Property Details:

Direction	Zoning	Use
North	Greenfield District	Attached Single-family Residential
South	Gateway District	Commercial
East	Greenfield District	Single-family Residential
West	City of Southfield	Commercial

Items to be addressed: *None.*

NATURAL FEATURES

The site has been graded for two houses. No natural features exist.

BUILDING ARRANGEMENT AND SITE DESIGN

The site will be accessed via a curb cut off Greenfield. The office building is setback back at the rear of the site. Parking is located in front (adjacent to Greenfield) and to the south side of the proposed building.

Items to be addressed: *None*

AREA, WIDTH, HEIGHT, SETBACKS

Sec. 138-397- Schedule of regulations of the Zoning Ordinance establishes the dimensional requirements for the Greenfield District.

Please note: The setback standards in the Greenfield District differ from other zoning districts, in that the setbacks are dictated by height of the proposed building and the height or type of land use on the adjacent property.

If new development is….	**And is next to….**	**Then required separation is at least….**
A building 30 ft or less in height	A single family house	15 feet
A parking lot	Any type of building	15 feet
A building between 31 and 40 feet in height	A single family house	30 feet

A building between 31 and 40 feet in height	A building between 31 and 40 feet in height	15 feet

	Required	Provided	Compliance
Side (north)	*North – Adjacent to multiple family residential* The proposed office building is 7 ft. 3 ½ "from the north property line, measured at its closest distance. The submitted plans show the separation distance of the proposed office building from the north multiple family residential building as 17 ft. 11 ½. According to the above table, the proposed development is less than 30 ft. in height (18 ft. 4 in.), and has provided less than 15 ft. setback from the north property line, but more than 15 ft. separation distance from the multiple family residential building.	17' 11"	Complies
Side (South)	The proposed office building is approximately 25 ft. from the south property line. The above table does not include a separation distance between the proposed development and an adjacent parking lot.	Over 25 feet	Complies
Rear (East)	The proposed office building is 12 ft. from the east property line, as	Over 15 feet	Complies

	shown on the site plan. As shown on the aerial image above, the subject property and the residences to the east share a rear property line. Therefore, there is more than 15 feet separation distance between the proposed office building and the adjacent dwelling.		
Building Height	The maximum height of a building in the Greenfield District shall be 3 stories, but not more than 40 ft.	18 ft. 4 in., measured from grade to the top of the parapet.	Complies
Lot Coverage	The Greenfield District does not have a maximum percentage of lot coverage. The subject site is 17,250 sq. ft. (0.40 acres). The proposed 4,644 sq. ft. office building will occupy approximately 26.9% of the lot, leaving the remaining are to be occupied by impervious surface for parking and dumpster enclosure, and some green space for landscaping.	26.9%	Not Applicable

Items to be addressed: *None*

PARKING

Section 138-219 of the Zoning Ordinance requires:

	Required	Provided
Business and professional offices of architects, engineers, landscape architects, lawyers or similar allied professions: One per 225 square feet of usable floor area	2,787 usable square feet / 225 = 13 spaces	17

Barrier Free	2	2
Bicycle Parking	2	2
Loading	0	0
Total	**13 spaces**	**13 spaces plus 2 bike spaces**

Items to be Addressed: *None*

SITE ACCESS AND CIRCULATION

Sec. 138-398. - Building design requirements.

a) **All development in the Greenfield district (except single family detached houses) shall front and have primary access from Greenfield.**

CWA Comment: The development fronts Greenfield with primary access from Greenfield

b) **Developments that face Ellwood shall be residential in character.**

CWA Comment: Not Applicable

c) **The planning commission may require screening including masonry walls up to 6 feet in height, decorative fencing or landscaping.**

CWA Comment: The applicant is proposing a 5-foot 8-inch split face block screen wall along the eastern property line (adjacent to single-family residential). There is no proposed screening to the north or south.

d) **The first floor elevation of a building that fronts a street shall be composed of a minimum of 30 percent and a maximum of 80 percent windows. When there is a choice between a major thoroughfare and a minor street, the elevation that faces the major thoroughfare shall be considered the front.**

CWA Comment: It appears that the front elevation meets the 30 to 80% transparency requirement; however applicant should confirm.

e) **The building elevation that fronts a street shall contain an entrance. The entrance shall access the first floor of the building. When there is a choice between a major thoroughfare and a minor street, the elevation that faces the major thoroughfare shall be considered the front.**

CWA Comment: The development fronts Greenfield with all entrances fronting on Greenfield.

f) The planning commission may revise these requirements, if the commission finds that the standards for site plan approval, as outlined in section 138-678, have been met.

CWA Comment: It does not appear that the Planning Commission needs to revise the requirements.

Items to be Addressed: *1). Confirm transparency*

LANDSCAPING AND SCREENING

A landscaping plan has been provided on sheet C-1. The applicant proposes three (3) evergreen and three (3) native grass clumps. All proposed landscaping is located in the southeast corner of the site. As set forth in section 130-37, when the development of any property requiring site plan approval occurs, the City Planning Commission shall review landscaping plans and may require trees to be planted on or near the site consistent with the elements of the adopted city master plan.

The applicant should consider additional landscaping.

Masonry Screening:

The applicant proposes a 6-foot-tall masonry screen wall along the eastern property line to screen the site from the adjacent single-family residential. The applicant should provide a detail of the proposed masonry wall. The wall should be architecturally consistent with building.

Trash Enclosure:

The applicant is proposing one (1) trash enclosure, to be screened with a 6-foot tall masonry wall. The applicant did not provide a detail of the proposed screening.

Items to be Addressed*: Applicant considers additional landscaping and Planning Commission to review the landscape plan.*

PHOTOMETRICS

A photometric plan has been provided. The applicant is proposing seven (7) building lights.

Items to be Addressed: *None*

EXTERIOR APPLIANCES

Applicant shall show exterior appliances (air conditioners, generators, etc.) on site plan to ensure compliance with Sec. 138-73.

Items to be Addressed: *Applicant shall show exterior appliances (air conditioners, generators, etc.) on site plan to ensure compliance with Sec. 138-73.*

FLOOR PLAN AND ELEVATIONS

Floor plans and elevations have been provided. Materials include hardi plank lap siding, face brick, and red metal awning. The applicant notes the use of stone trim and stacked stone veneer. These materials have not been shown on the elevations.

Items to be Addressed: *Indicate location of stone trim and stacked stone veneer.*

DESIGN STANDARDS AND SITE PLAN REVIEW STANDARDS

As set forth in Sec. 138-679. – Standards, the site plan shall be reviewed and approved by the Planning Commission upon finding that:

1. The site meets the requirements of this Code.
2. The proposed development does not create adverse effects on public utilities, roads, or sidewalks.
3. Pedestrian and vehicular areas are designed for safety, convenience, and compliment adjacent site design.
4. Site design, architecture, signs, orientation, and materials are consistent with the city's master plan objectives and the design of the neighboring sites and buildings.
5. Landscaping, lighting, dumpster enclosures, and other site amenities are provided where appropriate and in a complementary fashion.
6. Site engineering has been provided to ensure that existing utilities will not be adversely affected.

Items to be Addressed: *Applicant addresses items noted in report.*

RECOMMENDATION

We recommend Planning Commission approval with the following conditions:

1. *Confirm transparency.*
2. *Applicant considers additional landscaping.*
3. *Indicate location of stone trim and stacked stone veneer.*

4. *Applicant shall show exterior appliances (air conditioners, generators, etc.) on site plan to ensure compliance with Sec. 138-73.*

Sincerely,

Benjamin R. Carlisle

CARLISLE/WORTMAN ASSOC., INC.
Benjamin R. Carlisle, LEED AP, AICP

HUBBELL, ROTH & CLARK, INC
CONSULTING ENGINEERS SINCE 1915

MAILING: PO Box 824
Bloomfield Hills, MI 48303-0824
SHIPPING: 555 Hulet Drive
Bloomfield Hills, MI 48302-0360
PHONE: 248-454-6300
WEBSITE: hrcengr.com

February 8, 2022

City of Berkley
3338 Coolidge Highway
Berkley, Michigan 48072

Attention: Mr. Matthew Baumgarten, City Manager
Ms. Kim Anderson, Building Clerk

Re: Proposed Office Building
3462-3478 Greenfield Road
Engineering Site Plan – Review No. 3
City of Berkley, MI

HRC Job No. 20210870.02

Dear Mr. Baumgarten and Ms. Anderson:

As Consulting Engineers for the City of Berkley, and in accordance with your request, we have completed the Engineering Site Plan review of the proposed subject development for compliance with the City of Berkley's engineering and site plan requirements. The plans were prepared by T. Fought & Associates, Inc., with the engineering site plan created by Orman Engineering of Waterford, Michigan. The plans have a revision date of January 21, 2022 and were received by this office on January 26, 2022 via email. The proposed project scope includes the demolition of two (2) residential homes, driveways, garages, a shed, and all other accessory site features, and construction of a multi-unit office building and new parking lot. The project encompasses redevelopment of the two (2) lots with existing houses as well as one (1) existing vacant lot (which partially houses a shed). The proposed new development is located on east side of Greenfield Road, north of 12 Mile Road. We hereby offer the following comments:

General:

1. The proposed compact car spaces and ADA parking space must have signage clearly stating them as such. These signs must be included in the plans. ***Signage stating compact car spots as such have been added to the plans. This item has been satisfactorily addressed.***

2. A Road Commission for Oakland County (RCOC) permit will be required for proposed work within the Greenfield Road right-of-way as well as for construction signage. ***This item is still applicable. Any permits required must be obtained and submitted to the City prior to construction.***

3. A soil erosion permit will likely be required from the Oakland County Water Resources Commissioner (OCWRC). If a soil erosion permit is required, it must be obtained, and a copy of the approved permit provided to the City prior to commencing construction. Regardless of whether a permit is required, the City will require silt fence to be installed around the perimeter of the site, filter fabric installed in nearby catch basins, and a temporary maintenance aggregate/mud mat constructed for access to and from the proposed site. ***This item is still applicable. Any permits required must be obtained and submitted to the City prior to construction.***

4. A sequence of construction including estimated lane closure durations must be added to the plans. *This item is still applicable, a sequence of construction has not been added to the plans.* **A sequence of construction has been added to the plans. This item has been satisfactorily addressed.**

5. A traffic control plan must be added to the plans.

6. A geotechnical investigation must be performed in order to evaluate the proposed storm detention system. The soil logs from that investigation must be shown on the plans, including the elevation of the groundwater table, soil types encountered, and the written report indicating the design recommendations or comments on the proposed stormwater collection system. ***This item is still applicable. A geotechnical investigation must be performed and the report submitted to the City.***

7. For the purposes of clarity, it is recommended that the Demolition Plan and proposed Engineering/Site Plan be shown on two (2) separate plan sheets. Further, both the Demolition and Engineering/Site Plan sheets must show all removal and proposed quantities including pavement, curb, sidewalk/ramp, utilities, trees, and landscape features. ***The existing and proposed site plans have been shown on separate sheets. This item has been satisfactorily addressed.***

8. The City may require additional sections of existing curb and gutter and sidewalks along Greenfield Road to be removed and replaced as part of the proposed project in order to address the current deteriorated conditions and will defer comment to the City.

<u>Water and Fire Protection Services</u>:

1. Permits may be required from the Department of Environment, Great Lakes, and Energy (EGLE) and from the OCWRC for the installation and connection of the new water main service. ***This item is still applicable. Any permits required must be obtained and submitted to the City prior to construction.***

2. The plans must include calculations for the new Residential Equivalent Unit (REU) value of the proposed (building) structures. These calculations must also support that the proposed water service is sufficiently sized for the new REU values. ***The REU value for the proposed building has been shown on the plans, and the water service lead appears to be adequately sized. This item has been satisfactorily addressed.***

3. The plans indicate a proposed water main connection to the existing water main in the Greenfield Road right-of-way (ROW). The City's Department of Public Works (DPW) requires a tapping sleeve, valve, and well be used for this connection. The plans must reflect this type of connection. Proposed finished grades for gate wells must be provided as well. *This item is still applicable. A valve and well must be shown and labeled on the plans, and must be added to the included structure schedule as well. In addition, a note calling for a tapping sleeve as a means of connection must be added to the plans.* **The notes regarding the live tap and connection details have been added to the plans. This item has been satisfactorily addressed.**

4. Where the water service connection is proposed, the existing pavement cross-sections will need to be sawcut, removed, and replaced in kind. The plans must indicate the pipe bedding and type of backfill to be used in the street excavation areas for the new pipe installation. Further, the pavement restoration will be as per RCOC and as previously mentioned, an RCOC permit will be required. *This item is still applicable. A note stating that any removed pavement shall be replaced in kind as well as details that indicate the bedding and backfill must be added to the plans.* **Notes stating to replace pavement in kind have been added to the plans. The RCOC permit must be obtained and submitted prior to construction.**

Storm Drainage and Detention/Sanitary Sewer:

1. The type of cover to be utilized on the proposed drainage structures must be indicated on the plans. Restricted covers may need to be utilized if required by the City's DPW being that the City's sewer system is combined. The Applicant must inquire directly with the DPW. Efforts must be made to avoid overtaxing the system with additional drainage from the development. ***The cover types have been shown on the structure schedule. This item has been satisfactorily addressed.***

2. Details of the outlet control structure and the connection to the existing combined system must be shown on the plans. ***Details for the outlet control structure have been added to the plans. This item has been satisfactorily addressed.***

3. The plans indicate detention calculations for a 100-year storm for the proposed development. The provided volume calculations show a 48" HDPE pipe length of 315 feet. Dimensions and/or additional details of the underground pipe system must be added to the plans. In addition, the proposed storm sewer layout, including diameter and length, must be clearly indicated on the site plan. *Dimensions and/or details showing the lengths of the underground detention system piping must be added to the plans to verify that the calculations are correct.* **The layout and dimensions of the underground pipes have been shown on the plans and the calculations demonstrate that the system is designed to provide adequate storage. This item has been satisfactorily addressed.**

4. The developer will be required to complete a perpetuity maintenance agreement with the City for the proposed private stormwater systems. The Applicant must contact the City DPW regarding this item prior to commencing construction. ***The maintenance agreement has been submitted with the revised plans. The agreement will ultimately need to be reviewed and approved by the City and their attorney.***

5. Detail sheets for the proposed storm sewers must be provided with structures, covers, pipe requirements/cross sections and connection/tap details in accordance with City and County Standards. In addition, shop drawings for the said appurtenances will be required to be reviewed by the City and HRC. *This item is still applicable. Storm sewer Details must be added to the plans.* **Storm sewer details have been shown on the plans. This item has been satisfactorily addressed.**

6. Inverts of the proposed storm sewer (utility profile) must be added to the plans to confirm positive drainage through the site to the detention system and to the combined sewer connection. ***Inverts and a profile of the proposed storm system have been added to the plans. This item has been satisfactorily addressed.***

7. The existing sanitary sewer leads must be properly abandoned via a spot liner or another DPW approved method. *The revised plans note that the existing sanitary lead will be capped at the existing main. This note regarding the method of abandonment must still be included on the plans.* **This note has been added to the plans. This item has been satisfactorily addressed.**

8. The proposed sanitary lead diameter and material is not indicated. The diameter of the sanitary lead as well as calculations showing that this size is adequate for the proposed development must be shown on the plans. ***The size and material of the sanitary lead has been called out on the plans. This item has been satisfactorily addressed.***

9. The proposed sanitary lead must include a new connection (TwisTee sewer saddle, as per the City DPW, or approved equal). *The plans do not mention the type of sanitary lead connection. This note must be added to the plans.* **This note has been added to the plans, however, the sanitary lead must utilize a new connection. Reusing the existing connection is not permitted. This must be updated on the plans.**

Recommendation:

Based on our aforementioned comments, we recommend approval of the proposed Site Plan, subject to the applicant addressing the sanitary lead connection and obtaining and submitting copies of the geotechnical report which confirms the feasibility of the underground storm system for the site soils as well as any necessary permits.

If you have any questions or require any additional information, please contact the undersigned.

Very truly yours,

HUBBELL, ROTH & CLARK, INC.

Edward D. Zmich
Project Manager

Mitch Stark
Review Engineer

EDZ/MAS/mas
pc: City of Berkley; Mr. Derrick Schueller, Mr. Shawn Young
Carlisle Wortman & Associates; Ben Carlisle, Megan Masson-Minock
Orman Engineering; Alexander Orman
T. Fought & Associates; Timothy Fought
HRC; R. Alix, File

Dept. of Public Works

Memo

To: Megan Masson-Minock, Interim Community Development Director (via email)

Cc: Kim Anderson, Community Development (via email)
Shawn Young, DPW Foreman (via email)
Eddie Zmich, HRC (via email)

From: Derrick Schueller, DPW Director

Date: February 7, 2022

Subject: Proposed Office Building
Plan Review #3
3462-3478 Greenfield

We have reviewed the revised plans provided by the Community Development Department on January 26 and prepared by T. Fought & Associates and Orman Engineering. Please find below our comments:

1. The applicant is responsible for verifying the private lateral connections for both existing homes. We have been informed that the lateral connection for 3462 Greenfield is likely connected to the larger WRC sewer further into Greenfield Road and not the City line as shown on the current plan. The applicant shall have a licensed plumber video the existing laterals to accurately depict the connections on the plans. The applicant did note to "see attached supporting documents for this item" but we have been unable to locate this information. This item will impact the scope as well as WRC and RCOC permitting, including traffic control plans (e.g. the potential for multiple lane closures).

2. It appears the applicant is proposing to re-utilize the existing 6" sanitary sewer tap at the southern property (see call out on sheet SP-2). A new tap must be made in a different location (existing sewer connections cannot be reused).

Additionally, the following items shall be provided to the City prior to scheduling a preconstruction meeting:

1. A plan approval letter from the City's engineering consultant, Hubbell, Roth & Clark (HRC).

2. Greenfield Road is under the jurisdiction of RCOC. An RCOC permit must be provided to the City.

3. Depending on the outcome of the private lateral connections noted above, a WRC permit shall be provided to the City.

4. The parcel combination will need to be finalized with the Community Development Department with new Tax ID number identified.

5. A stormwater maintenance agreement shall be signed and finalized. An agreement template, as approved by the City Attorney, was previously provided to the applicant and shall be merged with the Exhibits.

6. A traffic control plan and sequence of construction shall be submitted to cover the ROW activities.

7. A construction schedule shall be provided with dates and durations of all major work items, including final restoration.

8. Proof of insurance is required with the City and HRC noted as additionally insured. Policy documents shall not include the language "…..as required by written contract…..".

9. Bonding and any escrow requirements will be noted later under separate cover.

10. Please note electronic as-built drawings and a PE signed and sealed certification letter indicating the underground detention system was constructed in accordance with the approved plans will be required following the utility installations.

Feel free to call with any questions or concerns. Thank you.

Jamil Realty LLC 4138 Twelve Mile Berkley, MI 48072	Jamil Realty LLC 29726 White Hall Drive Farmington Hills, MI 48331	
Monalocks Hair, LLC 4150 Twelve Mile Rd Berkley, MI 48072	Gevalin Gegaj 4162 Twelve Mile Berkley, MI 48072	A & W of Berkley 4100 Twelve Mile Berkley, MI 48072
Alco Glass & Mirror Inc 4195 Twelve Mile Berkley, MI 48072	Donald Moore 1900 Hickory Valley Rd Milford, MI 48380	D&D Bicycle Service 4141 Twelve Mile Berkley, MI 48072
Occupant 4135 Twelve Mile Berkley, MI 48072	Calvin Kassab 6695 Arlington Dr West Bloomfield, MI 48322	Carla Jones 41870 Chattman Dr Novi, MI 48375
Knotty Design Works 4111 Twelve Mile Berkley, MI 48072	Glenn Markowicz 22535 Statler St. Clair Shores, MI 48081	Black Ritual Tattoo 4105 W Twelve Mile Berkley, MI 48072
Gezim Pllumaj & Lize Pllumaj 42620 Silverwood Dr Sterling Heights, MI 48314	Country Oven of Berkley 4075 Twelve Mile Berkley, MI 48072	Sue Jakobcic 4228 S Fulton Pl Royal Oak, MI 48073
Bob LaFountain 3611 Ellwood Berkley, MI 48072	Steven Carson 3595 Ellwood Berkley, MI 48072	Jessica Strum & James Schofield 3577 Ellwood Berkley, MI 48072
Pamela Munro 3461 Cummings Berkley, MI 48072	Occupant 3559 Ellwood Berkley, MI 48072	Lesley A Jones 3541 Ellwood Berkley, MI 48072
Craig Pearce 47335 Anchor Dr Macomb, MI 48044	Alex Lesner 3535 Ellwood Berkley, MI 48072	Opal Fair 3505 Ellwood Berkley, MI 48072
Jarett & Olivia Sanders 3493 Ellwood Berkley, MI 48072	Michael C Moerman 3477 Ellwood Berkley, MI 48072	William Seaman 3461 Ellwood Berkley, MI 48072

Linda R Crumbley 3596 Ellwood Berkley, MI 48072	Joseph Remeika 3578 Ellwood Berkley, MI 48072	Leor J Lazar 3560 Ellwood Berkley, MI 48072
Israel Lazar 35497 Hereford Dr Huntington Woods, MI 48070	Benjamin Hirche 3540 Ellwood Berkley, MI 48072	Devan Shamo 3524 Ellwood Berkley, MI 48072
Elizabeth Glover 3506 Ellwood Berkley, MI 48072	Ellwood Street, LLC 6642 Leytonstone Blvd West Bloomfield, MI 48322	Real Deal Management 4454 Clintonville Rd Waterford, MI 48329
Elizabeth Fisher 3494 Ellwood Berkley, MI 48072	Samantha Strozynski 3478 Ellwood Berkley, MI 48072	Tim Sweeny 3462 Ellwood Berkley, MI 48072
Mark A Penxa 3446 Ellwood Berkley, MI 48072	Dale Morris 3279 Prairie Royal Oak, MI 48073	James Hramiel 3612 Greenfield Berkley, MI 48072
Natalia Nemtseva 3596 Greenfield Berkley, MI 48072	E Raz Housing One, LLC 47800 Gratiot Chesterfield, MI 48051	Occupant 3578 Greenfield Berkley, MI 48072
Delyan Raychev 1768 Creek Dr San Jose, CA 9+5125	Michigan Property Managers 3036 W Twelve Mile Berkley, MI 48072	Kevin Chih-Chieh Chang 3560 Greenfield Berkley, MI 48072
Amanda Preston 3540 Greenfield Berkley, MI 48072	North Green Trust 1359 Davis Ave Birmingham, MI 48009	Occupant 3478 Greenfield Berkley, MI 48072
Occupant 3462 Greenfield Berkley, MI 48072	Greenfield Berkley LLC 21100 Coolidge Oak Park, MI 48237	Occupant 3510 Greenfield Berkley, MI 48072
Brian D Gifford 3541 Thomas Berkley, MI 48072	David & Lindsay Miller 3523 Thomas Berkley, MI 48072	Trevor John Gavan 3505 Thomas Berkley, MI 48072

Edward Sosnoski, Jr 3493 Thomas Berkley, MI 48072	Brooke Kelter 3477 Thomas Berkley, MI 48072	Christopher Treiss 3461 Thomas Berkley, MI 48072
Jacob & Jeffrey Leider 3445 Thomas Berkley, MI 48072	Walgreen Co & Maple Southfield PO Box 1159 Deerfield, IL 60015	Acho Brothers LLC 3063 Middlebury Lane Bloomfield Hills, MI 48301
Abro Plaza Southfield LLC 3807 Beechcrest Rochester Hills, MI 48309	Tim Donut US Inc PO Box 460389 Houston, TX 77056	K&C Donuts, Inc 37102 Turnburry Dr Livonia, MI 48152
Abro Eleven Property LLC 3807 Beechcrest Rochester, MI 48309	Smokers Only 15526 W Twelve Mile Southfield, MI 48076	Studio Lush 15558 W Twelve Mile Southfield, MI 48076
Doggie Styles Pet Salon 15556 W Twelve Mile Southfield, MI 48076	Wendy’s 29069 Greenfield Southfield, MI 48076	Occupant 29095 Greenfield Southfield, MI 48076
Occupant 29111 Greenfield Southfield, MI 48076	Detroit Kid City 29115 Greenfield Southfield, MI 48076	Dollar Tree 29133 Greenfield Southfield, MI 48076


Ellwood
12 Mile

Carlisle | Wortman
ASSOCIATES, INC.

117 NORTH FIRST STREET SUITE 70 ANN ARBOR, MI 48104 734.662.2200 734.662.1935 FAX

TO: City of Berkley Planning Commission

FROM: Ben Carlisle, AICP
Megan Masson-Minock, AICP

DATE: February 18, 2022

RE: Downtown Design Guidelines Survey

Please find attached the results from the Planning Commission survey on the Downtown Design Guidelines. Thank you for your participation.

We look forward to seeing you at the Planning Commission workshop on Tuesday, March 1, to discuss this topic in more detail.

Yours Truly,

CARLISLE/WORTMAN ASSOC., INC.
Benjamin R. Carlisle, AICP, LEED AP
Principal

CARLISLE/WORTMAN ASSOC., INC.
Megan Masson-Minock, AICP
Planner

Richard K. Carlisle, *President* Douglas J. Lewan, *Executive Vice President* John L. Enos, *Principal*
David Scurto, *Principal* Benjamin R. Carlisle, *Principal* Sally M. Elmiger, *Principal* Craig Strong, *Principal* R. Donald Wortman, *Principal*
Laura K. Kreps, *Associate* Paul Montagno, *Associate*

City of Berkley DDA Design Guidelines & Zoning Ordinance Amendments

Results and Analysis

SoGoSurvey

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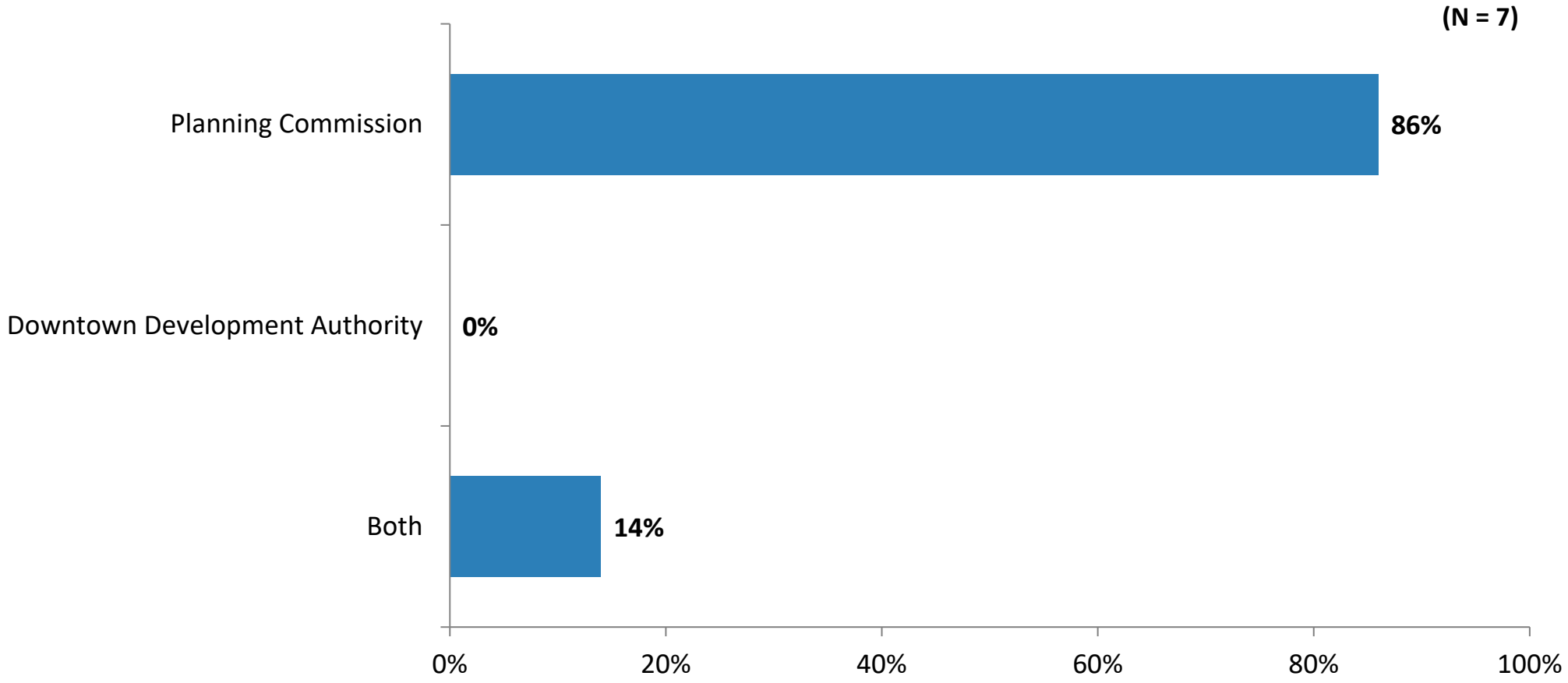
Which group do you currently serve on for the City of Berkley?



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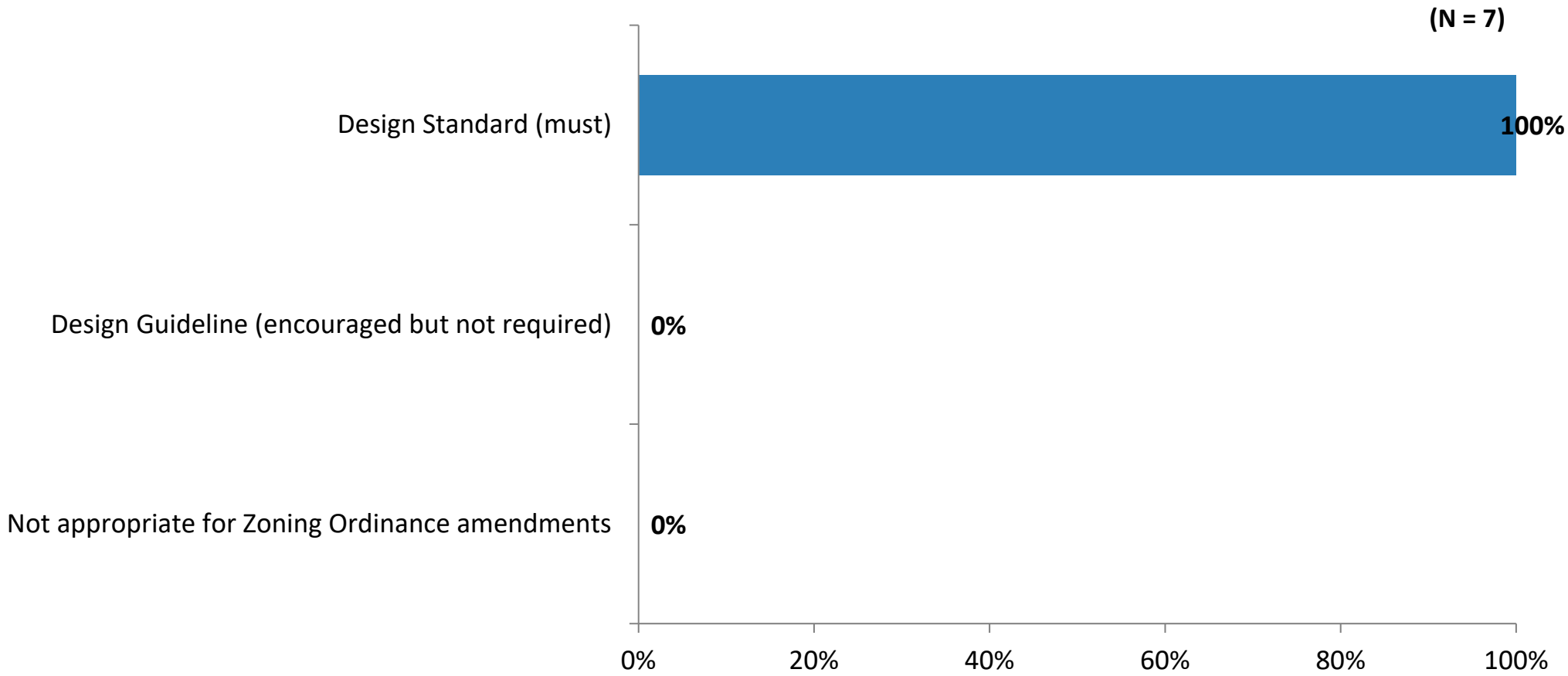
In your opinion, in the zoning ordinance amendments please select what aspects of the DDA Design Guidelines MUST be included as DESIGN STANDARDS (regulations that all new buildings must meet), SHOULD be included as DESIGN GUIDELINES (aspects that should be encouraged or incentivized but not required), or SHOULD NOT be included in the zoning ordinance amendments?: Building Placement (setbacks and location)



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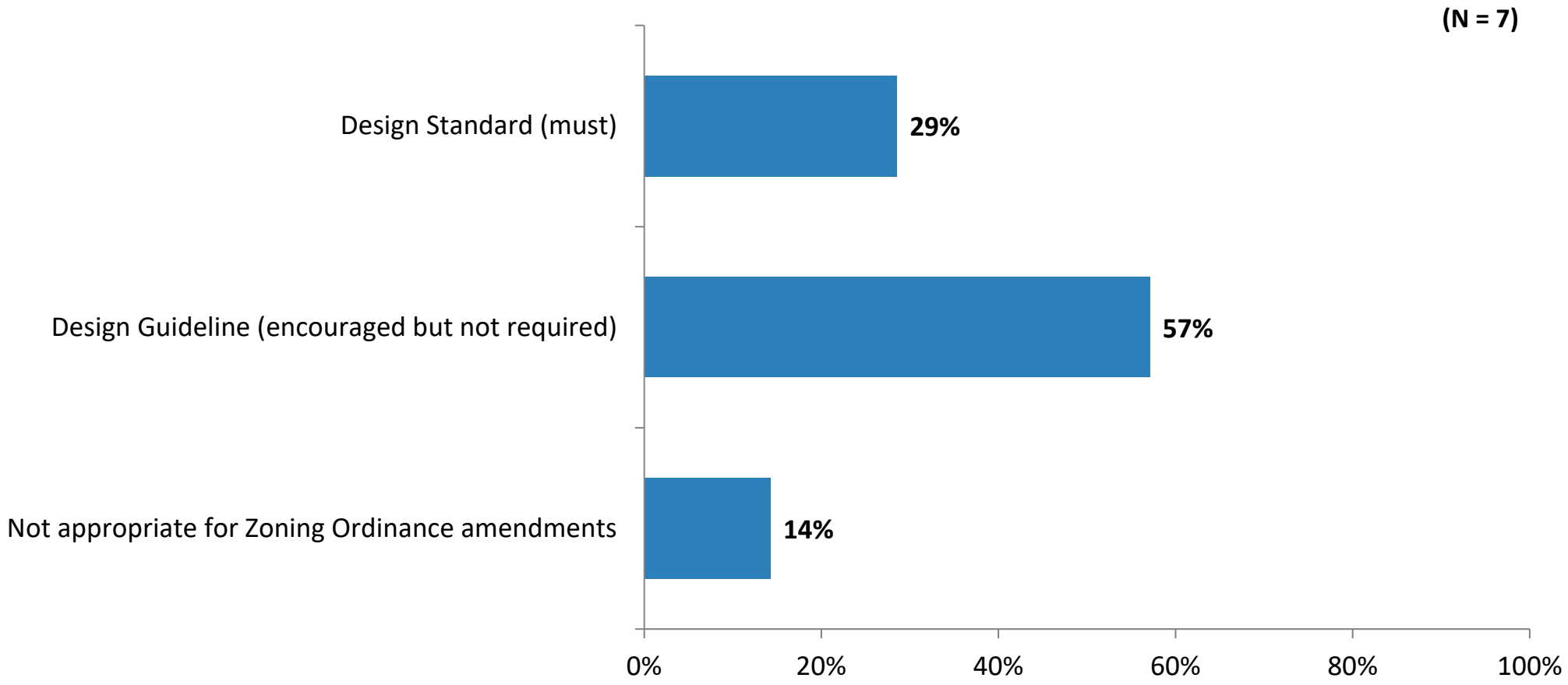
In your opinion, in the zoning ordinance amendments please select what aspects of the DDA Design Guidelines MUST be included as DESIGN STANDARDS (regulations that all new buildings must meet), SHOULD be included as DESIGN GUIDELINES (aspects that should be encouraged or incentivized but not required), or SHOULD NOT be included in the zoning ordinance amendments?: Setback Character (space between the building and sidewalk edge)



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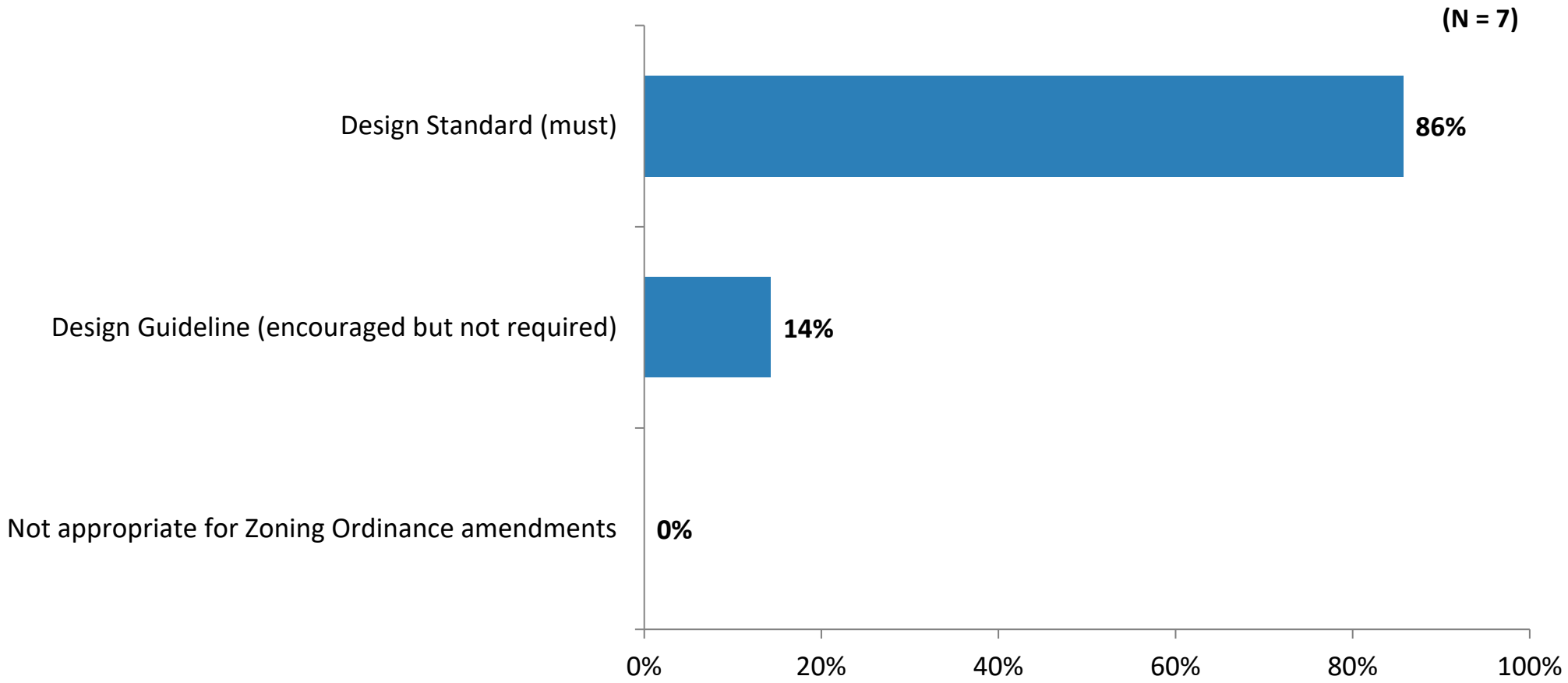

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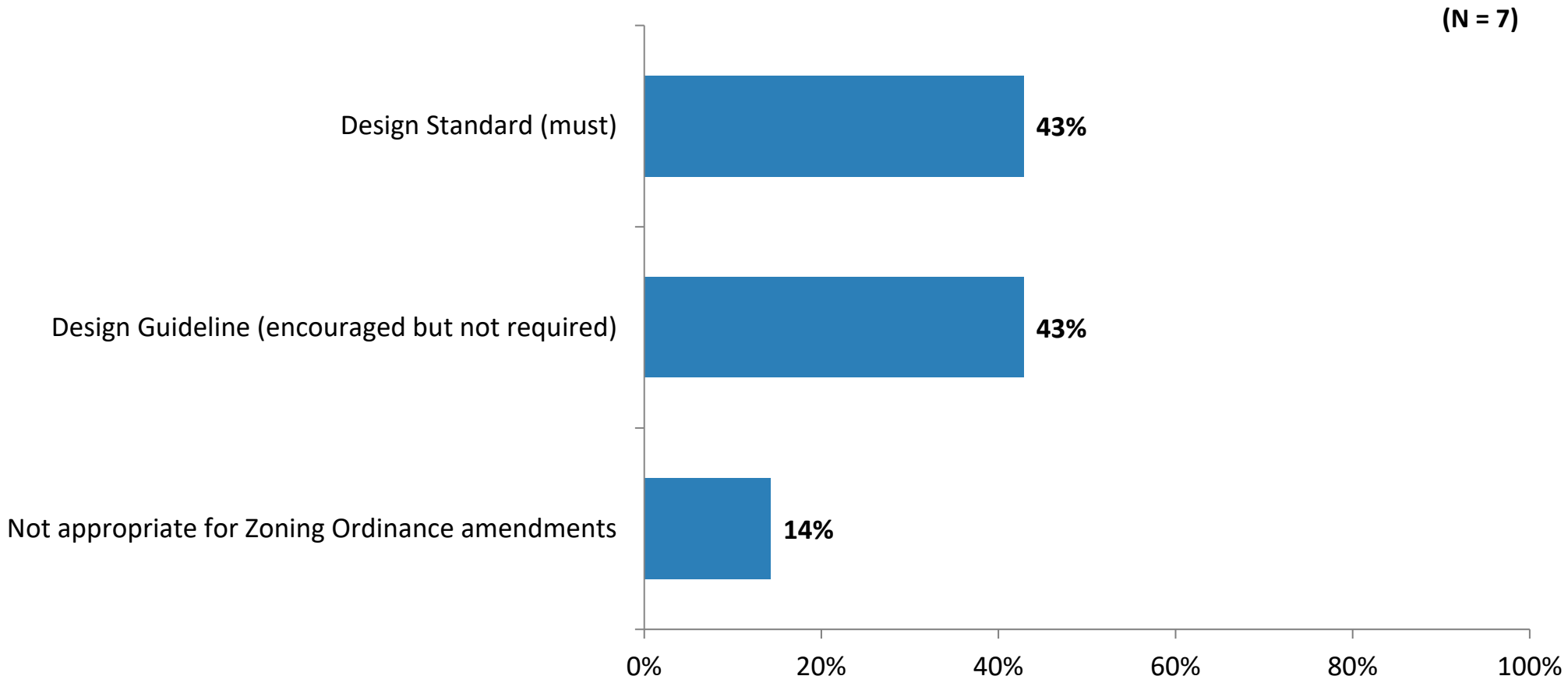

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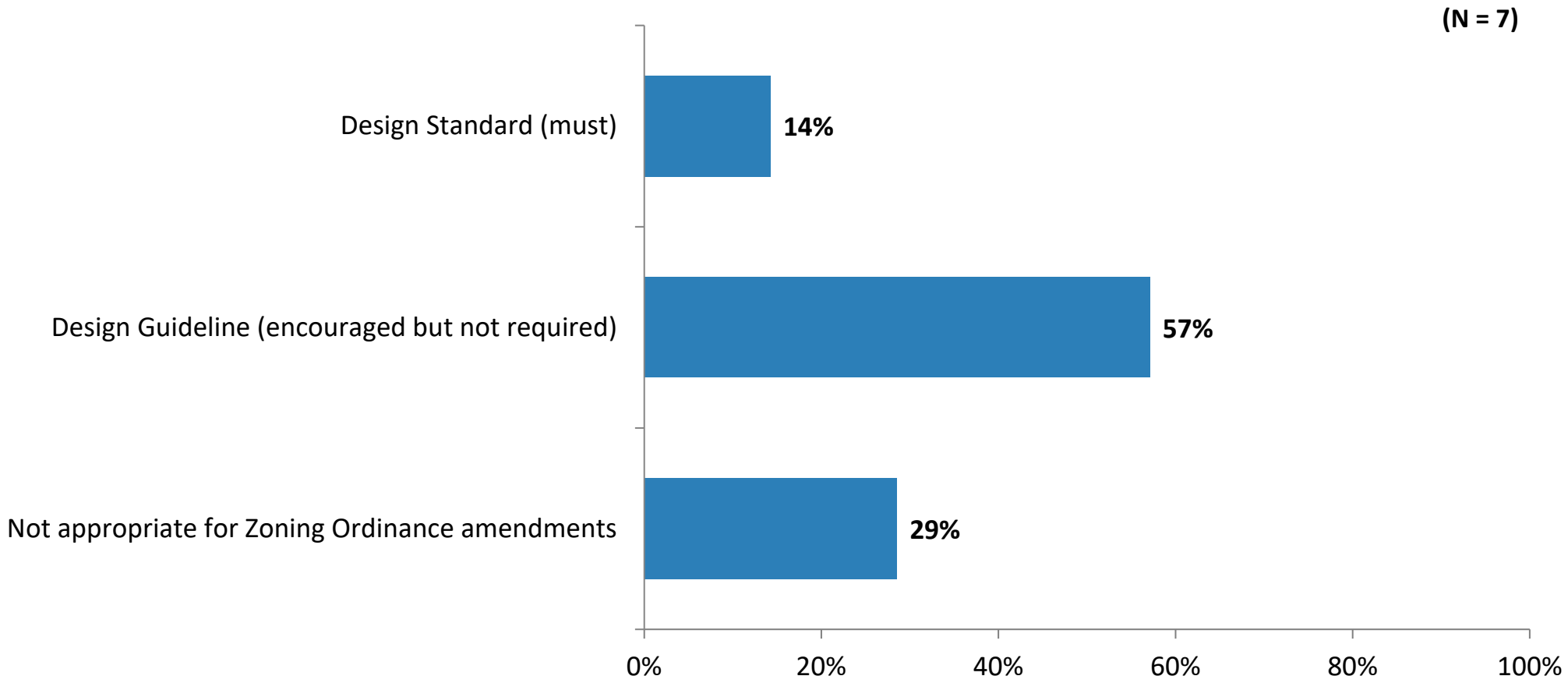
In your opinion, in the zoning ordinance amendments please select what aspects of the DDA Design Guidelines MUST be included as DESIGN STANDARDS (regulations that all new buildings must meet), SHOULD be included as DESIGN GUIDELINES (aspects that should be encouraged or incentivized but not required), or SHOULD NOT be included in the zoning ordinance amendments?: Outdoor Amenity Space (plazas, courtyards, outdoor dining, public art)



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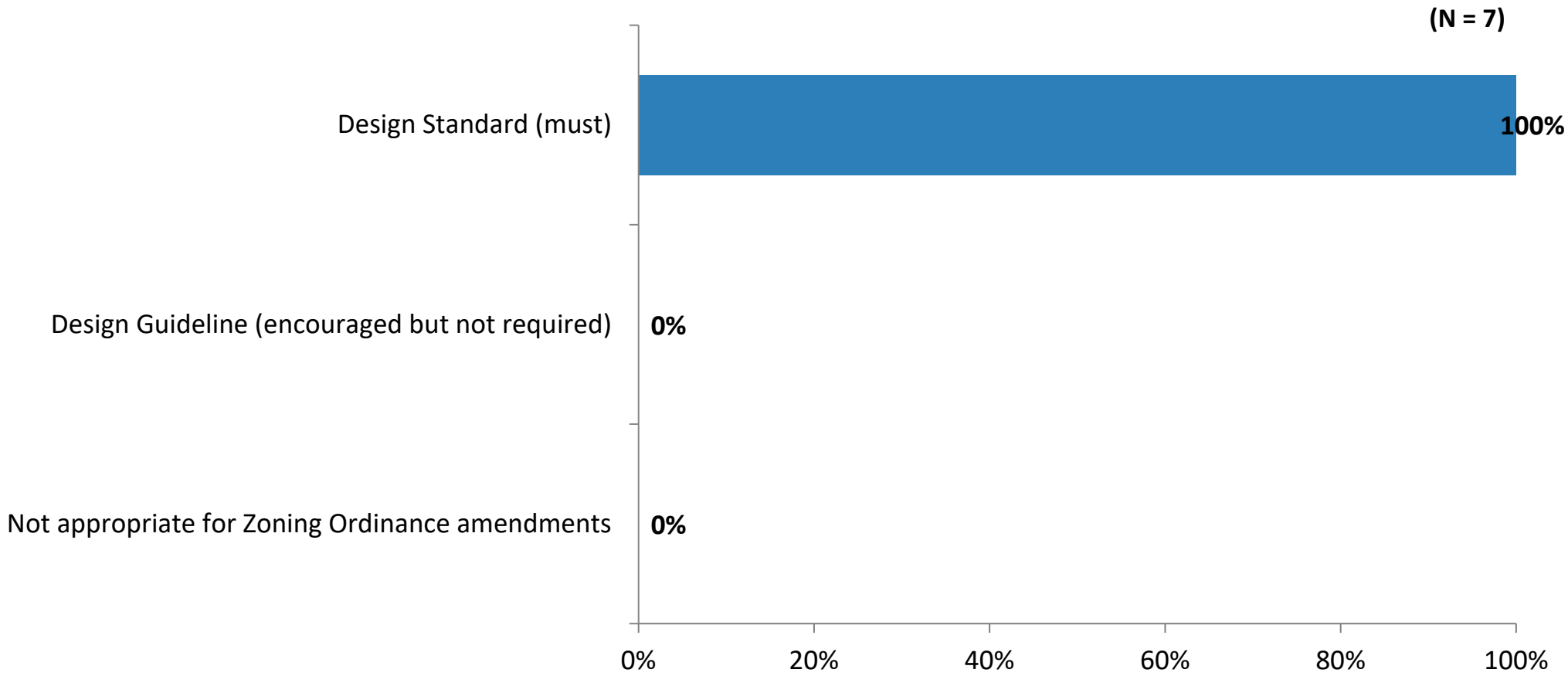
In your opinion, in the zoning ordinance amendments please select what aspects of the DDA Design Guidelines MUST be included as DESIGN STANDARDS (regulations that all new buildings must meet), SHOULD be included as DESIGN GUIDELINES (aspects that should be encouraged or incentivized but not required), or SHOULD NOT be included in the zoning ordinance amendments?: Parking Lots (location, screening, pedestrian access, adaptive re-use)



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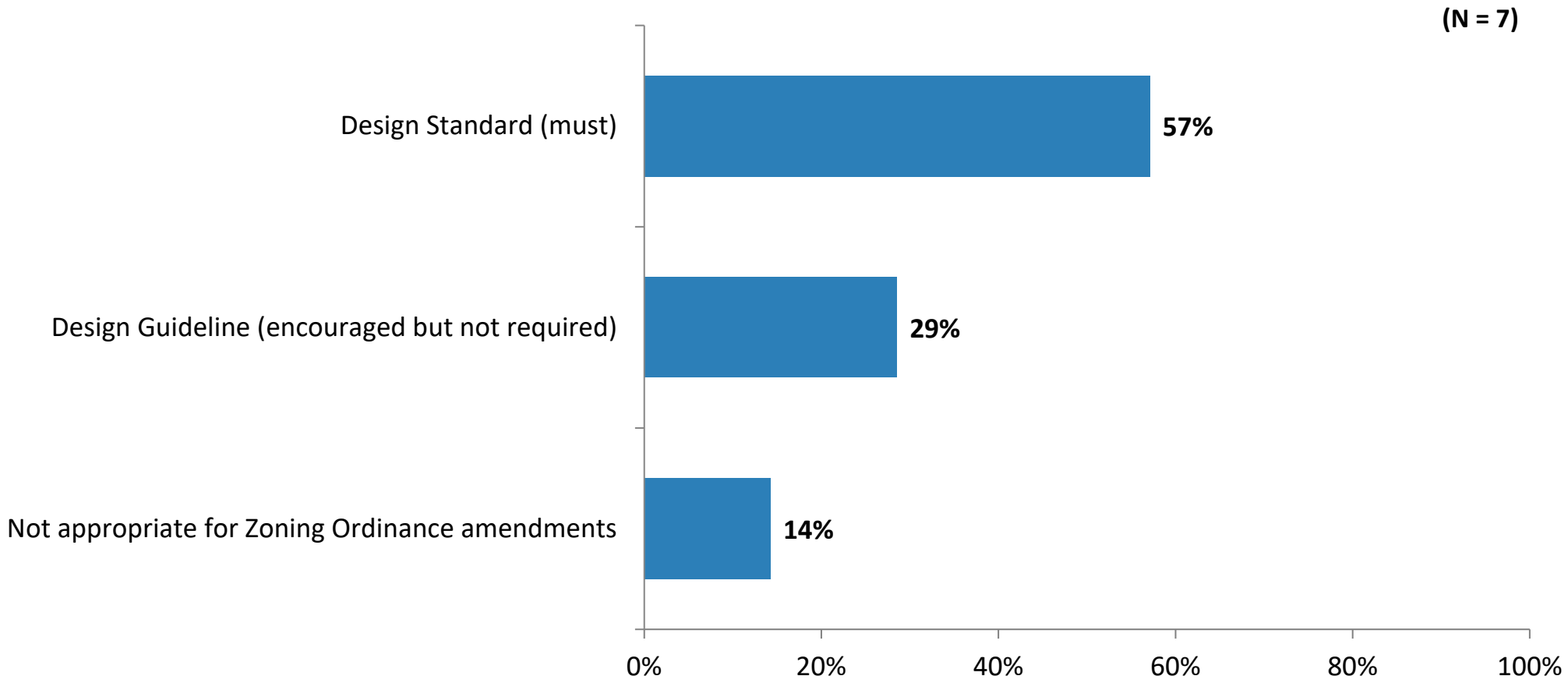

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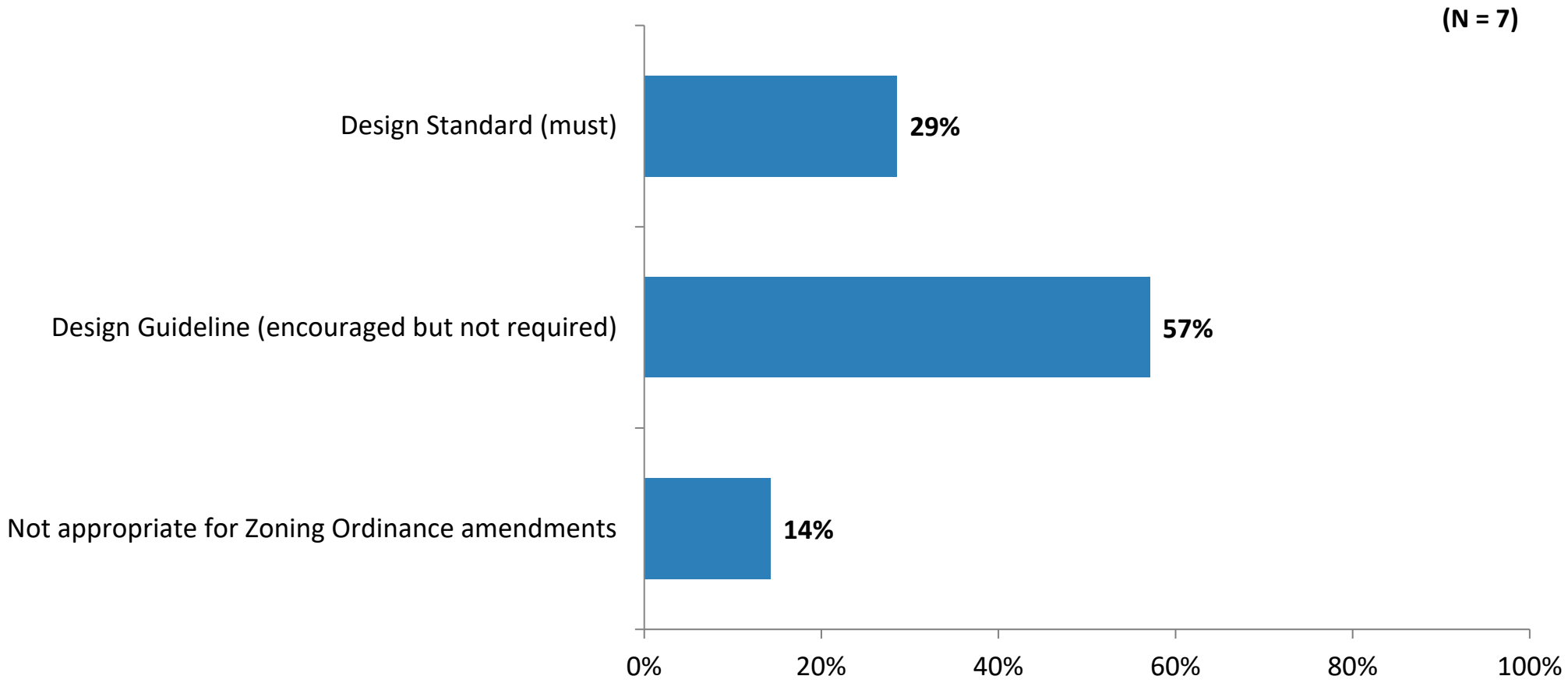

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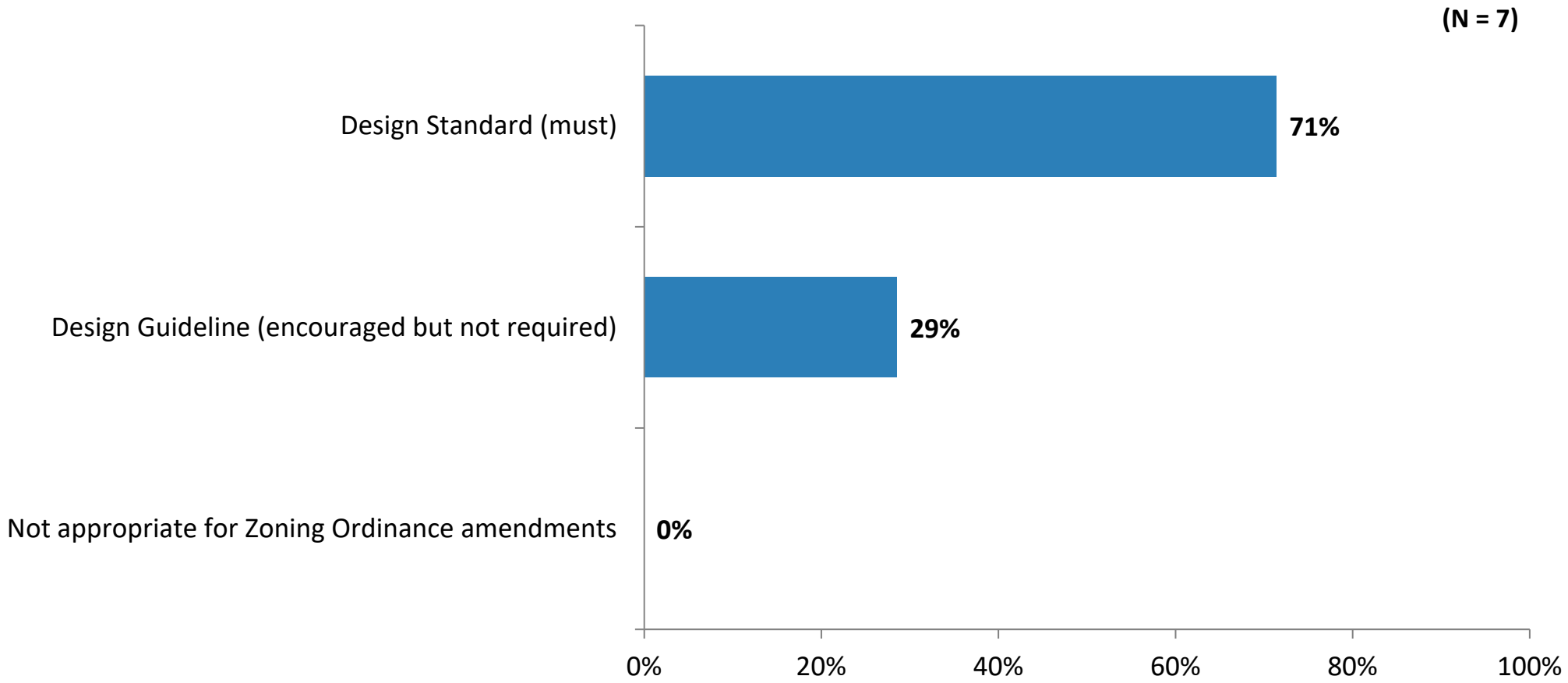

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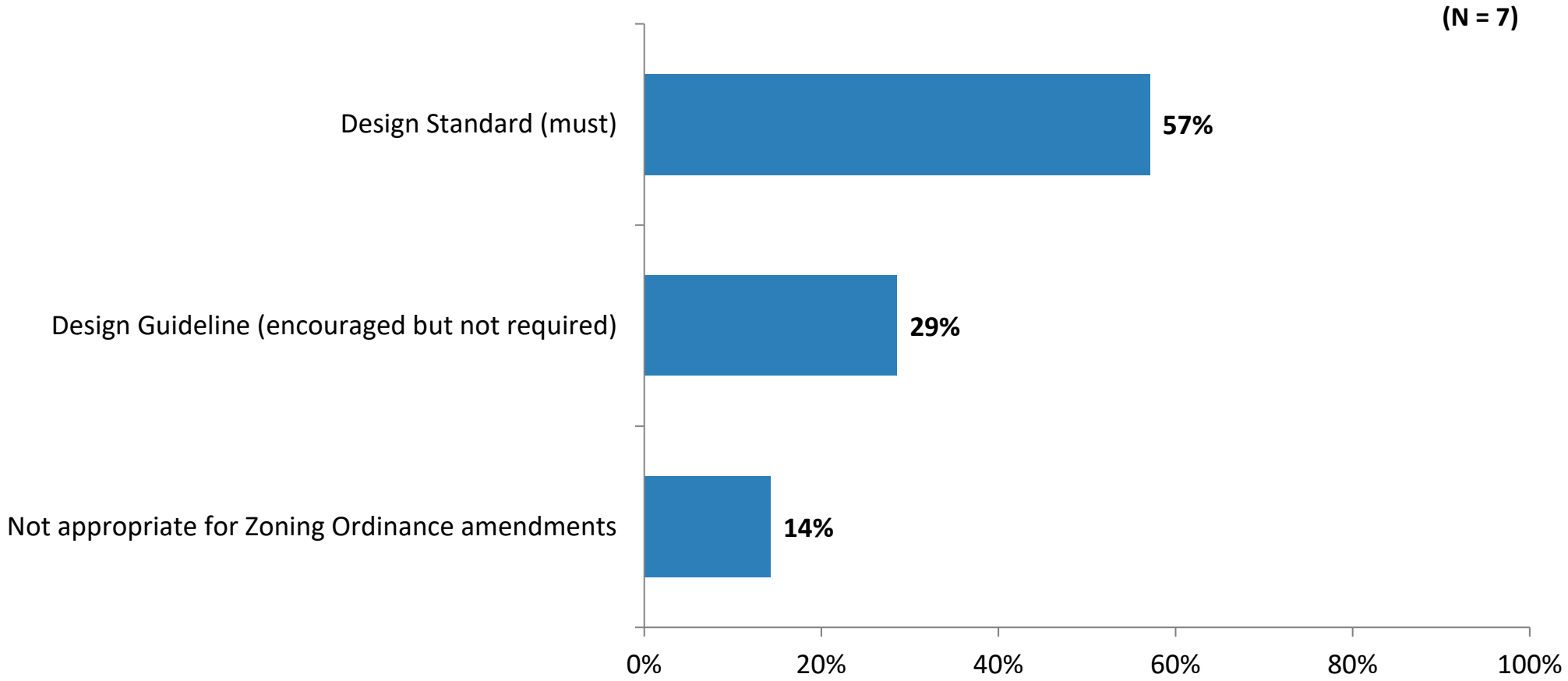

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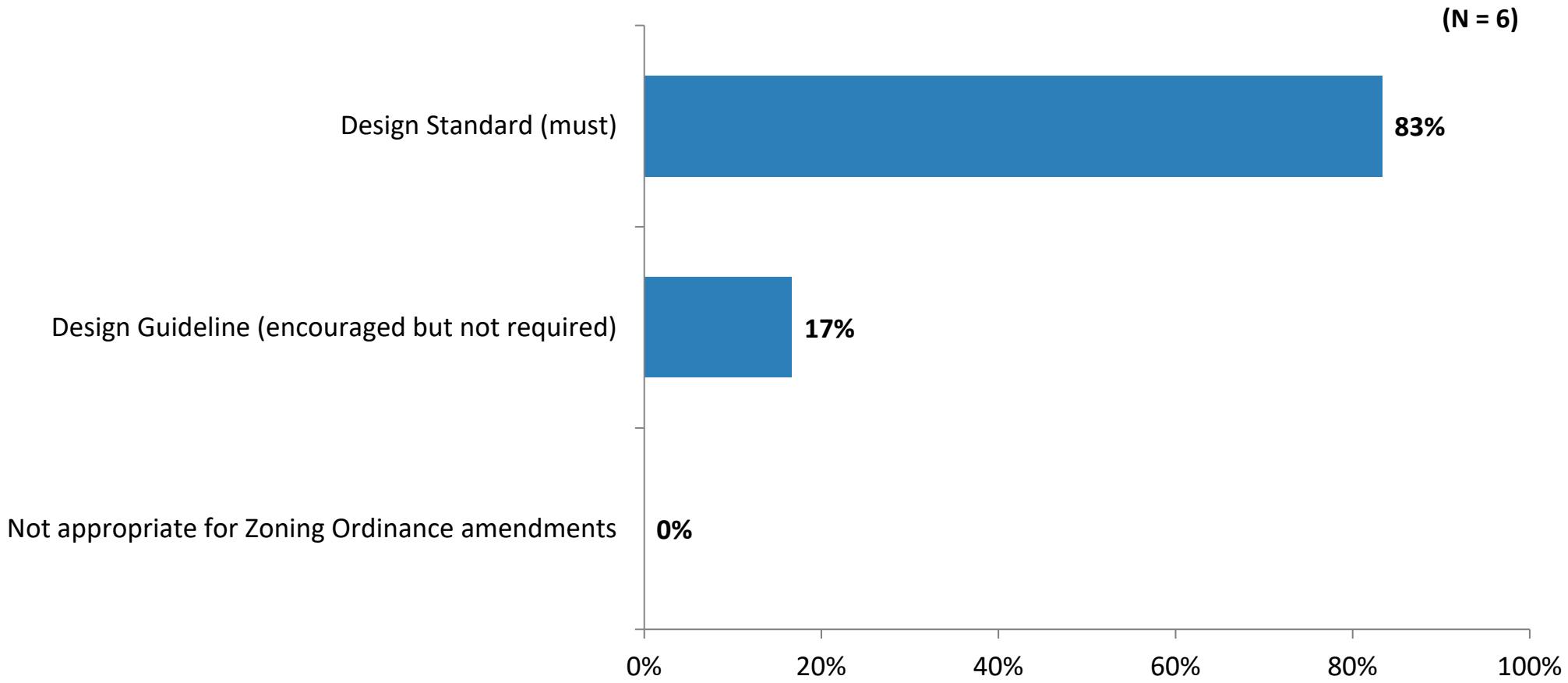

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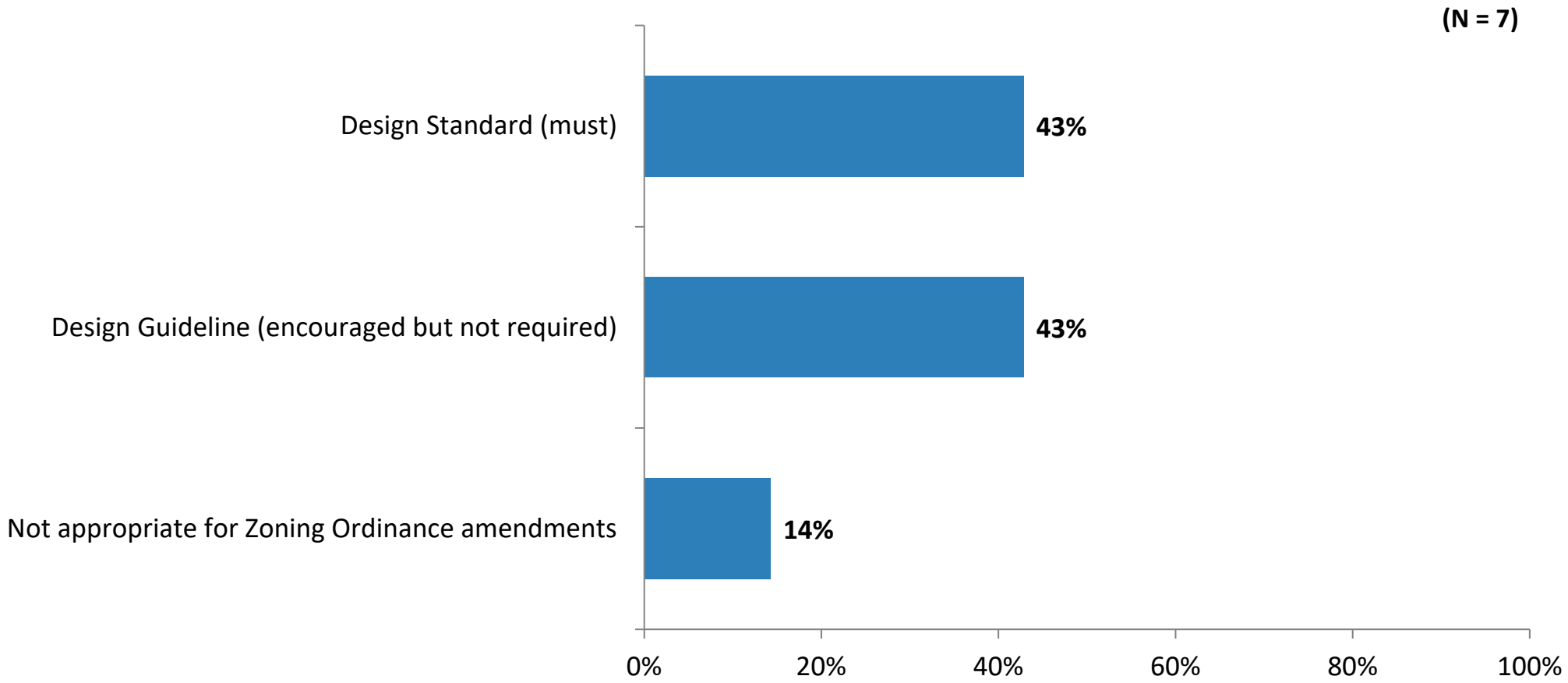

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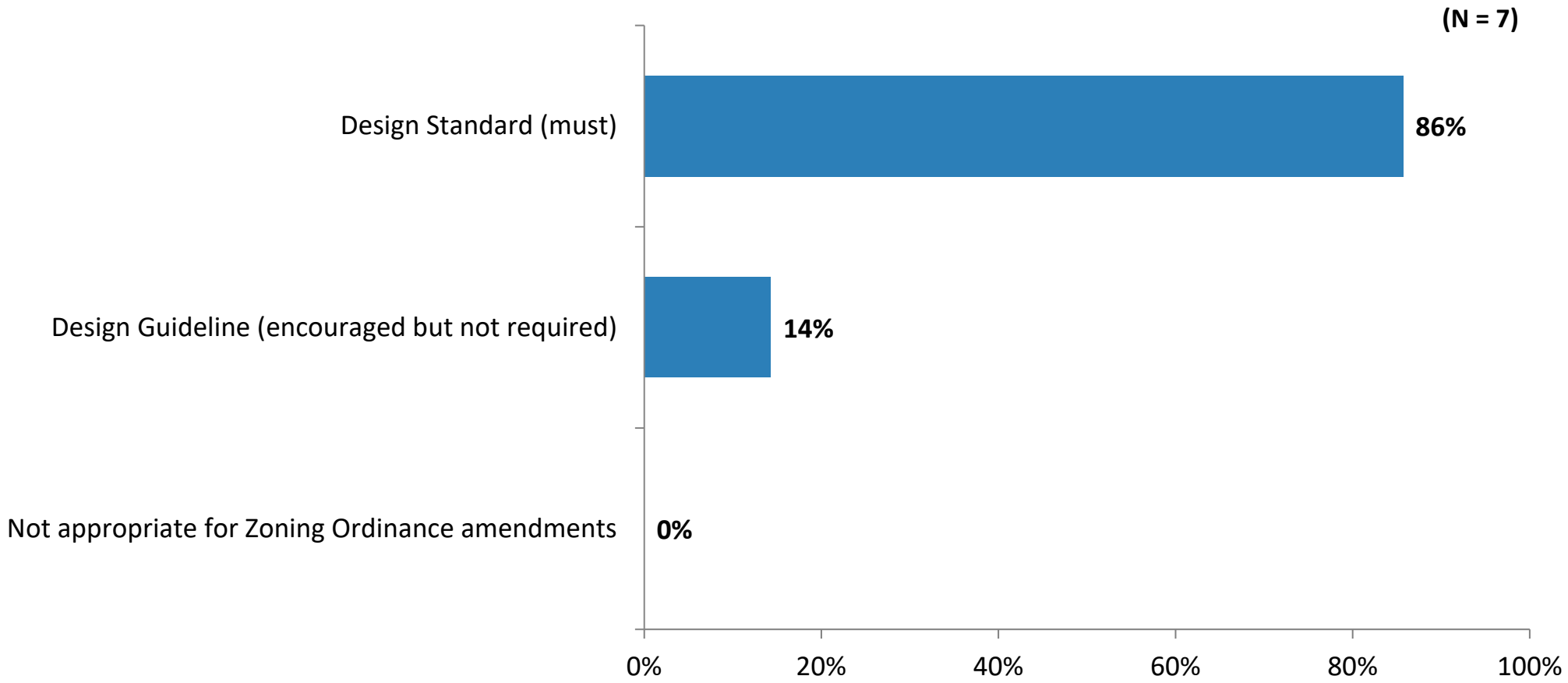

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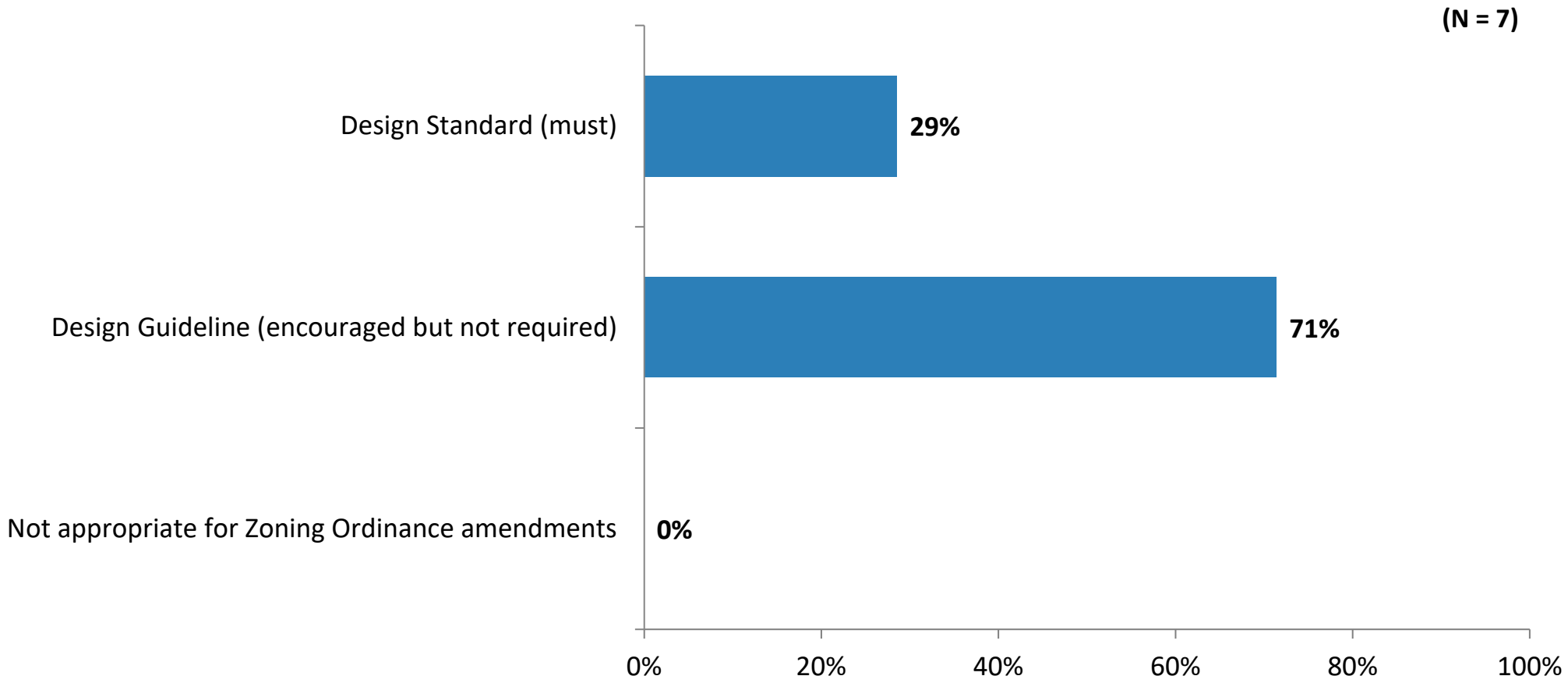

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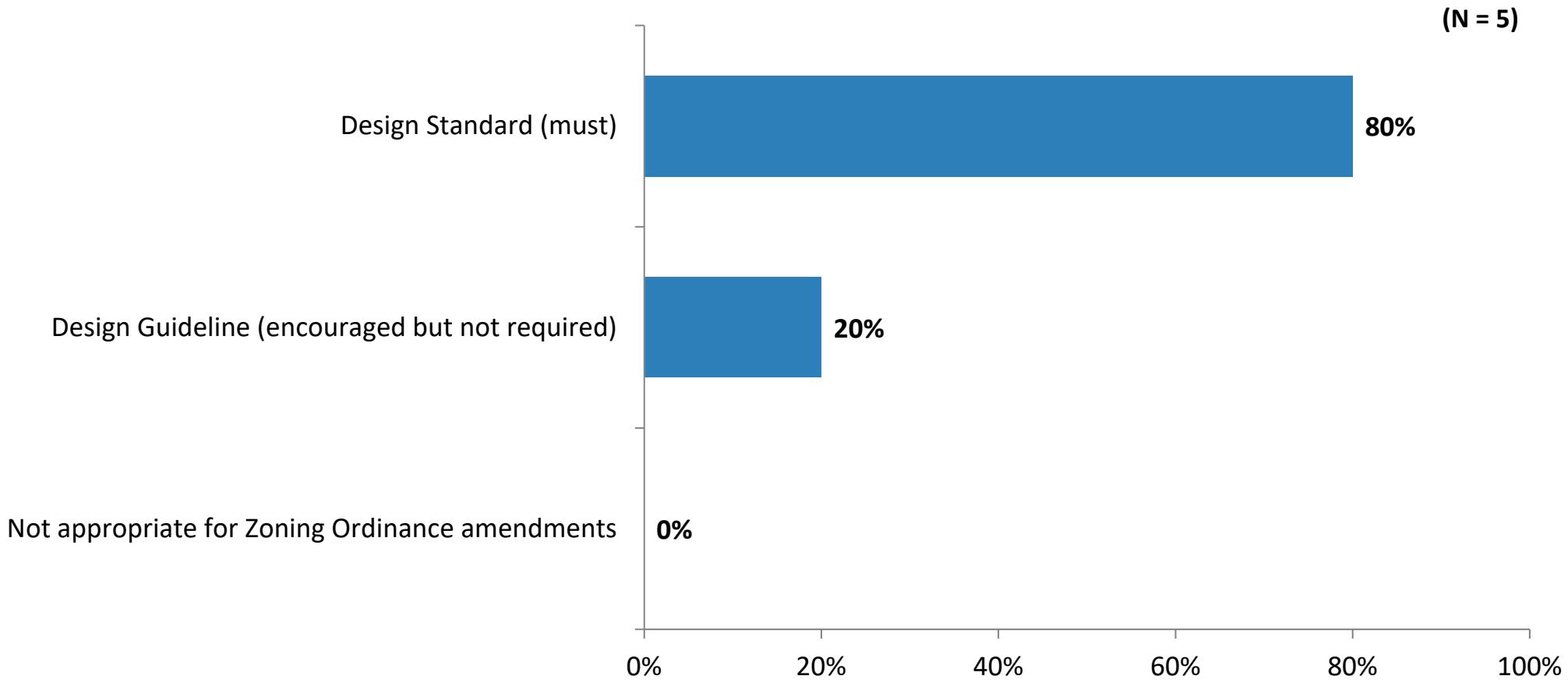

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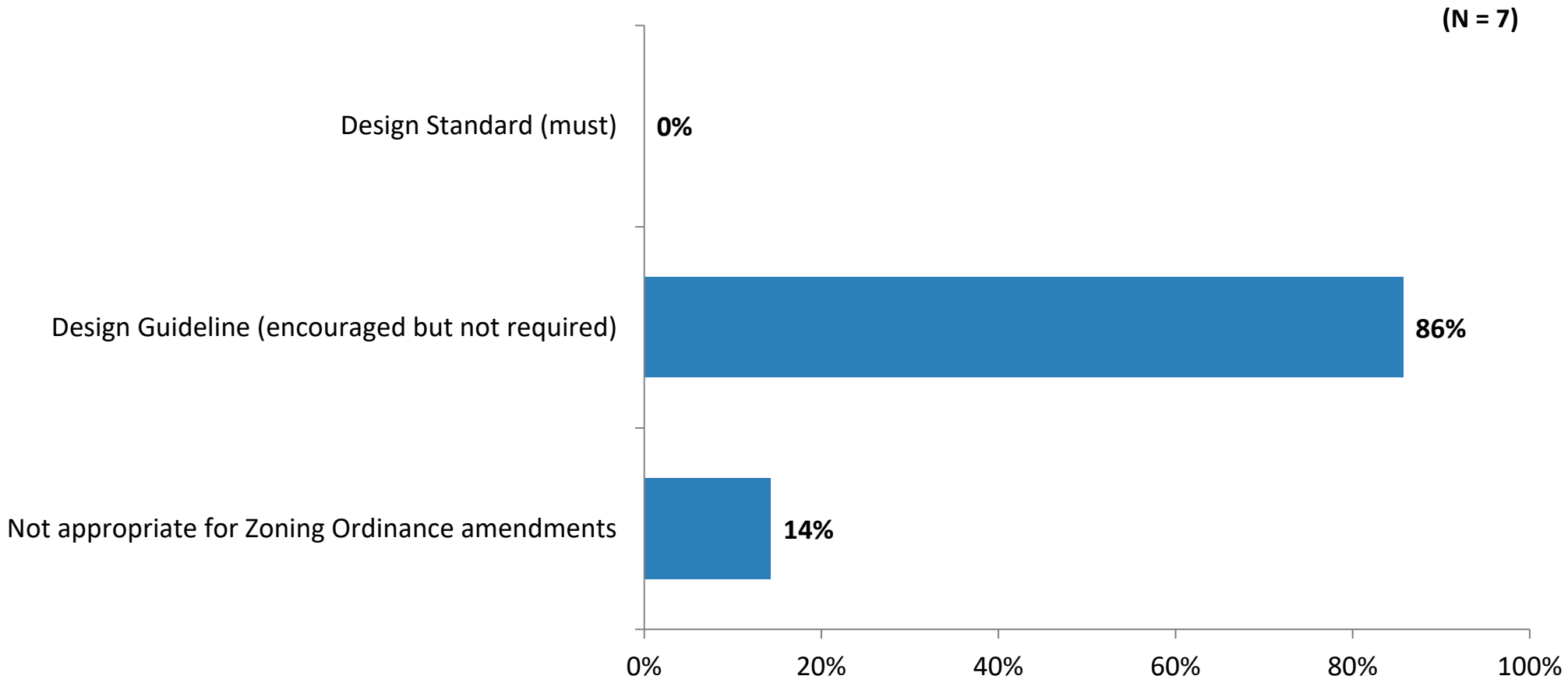

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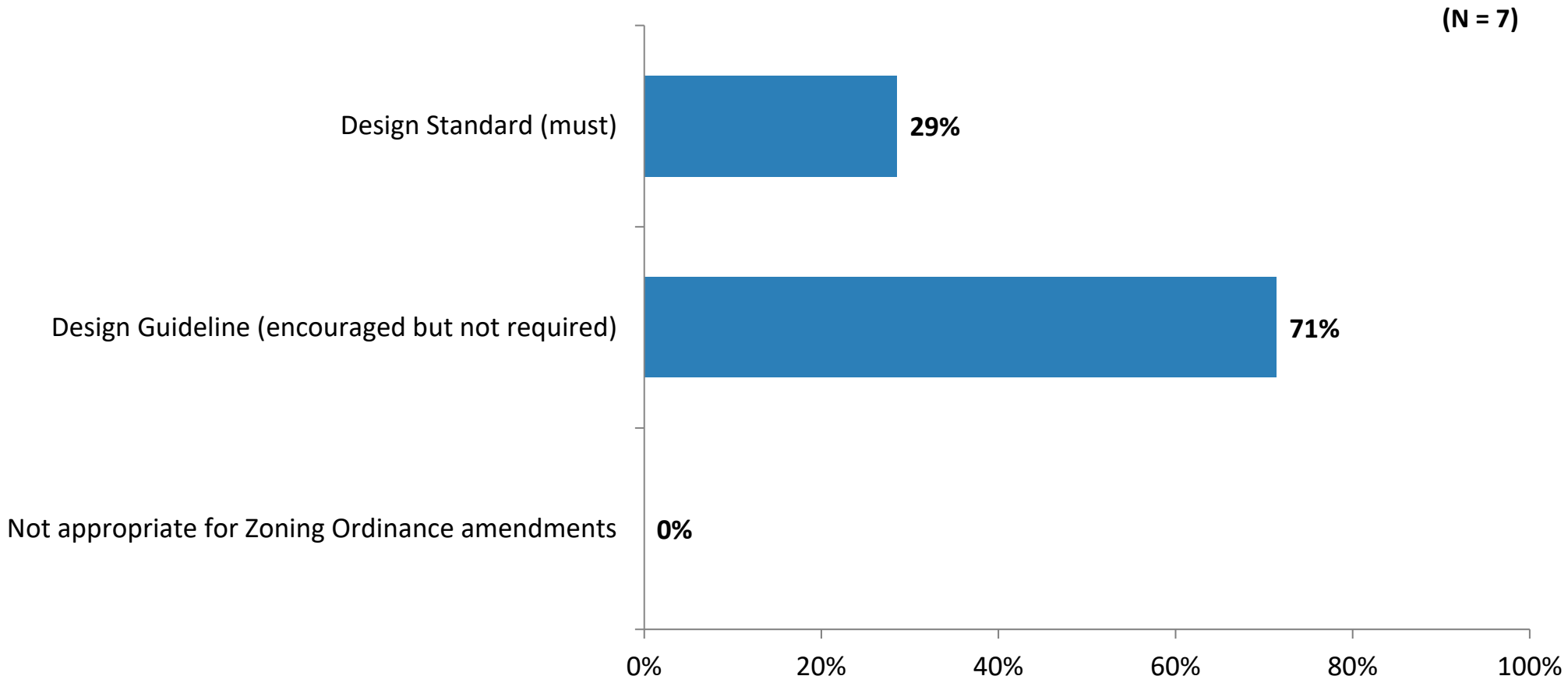

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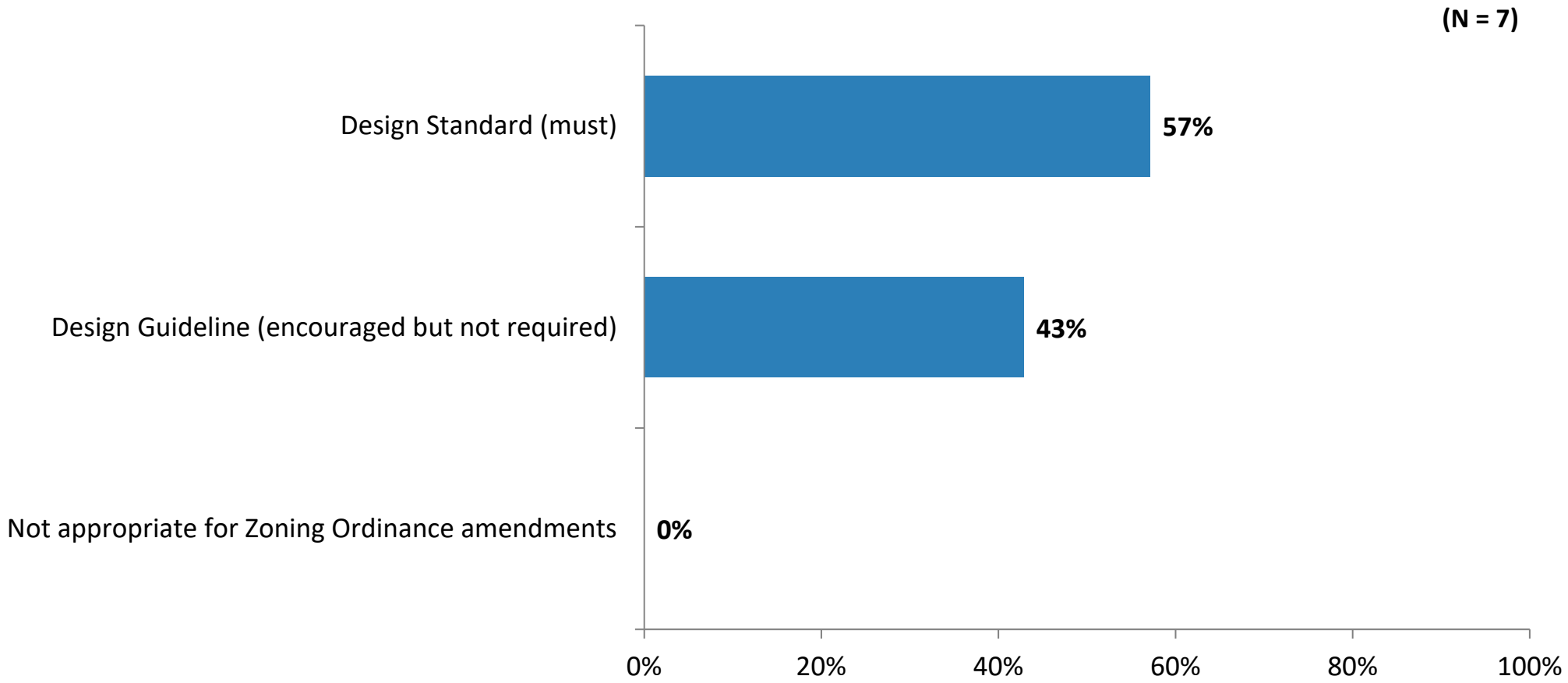

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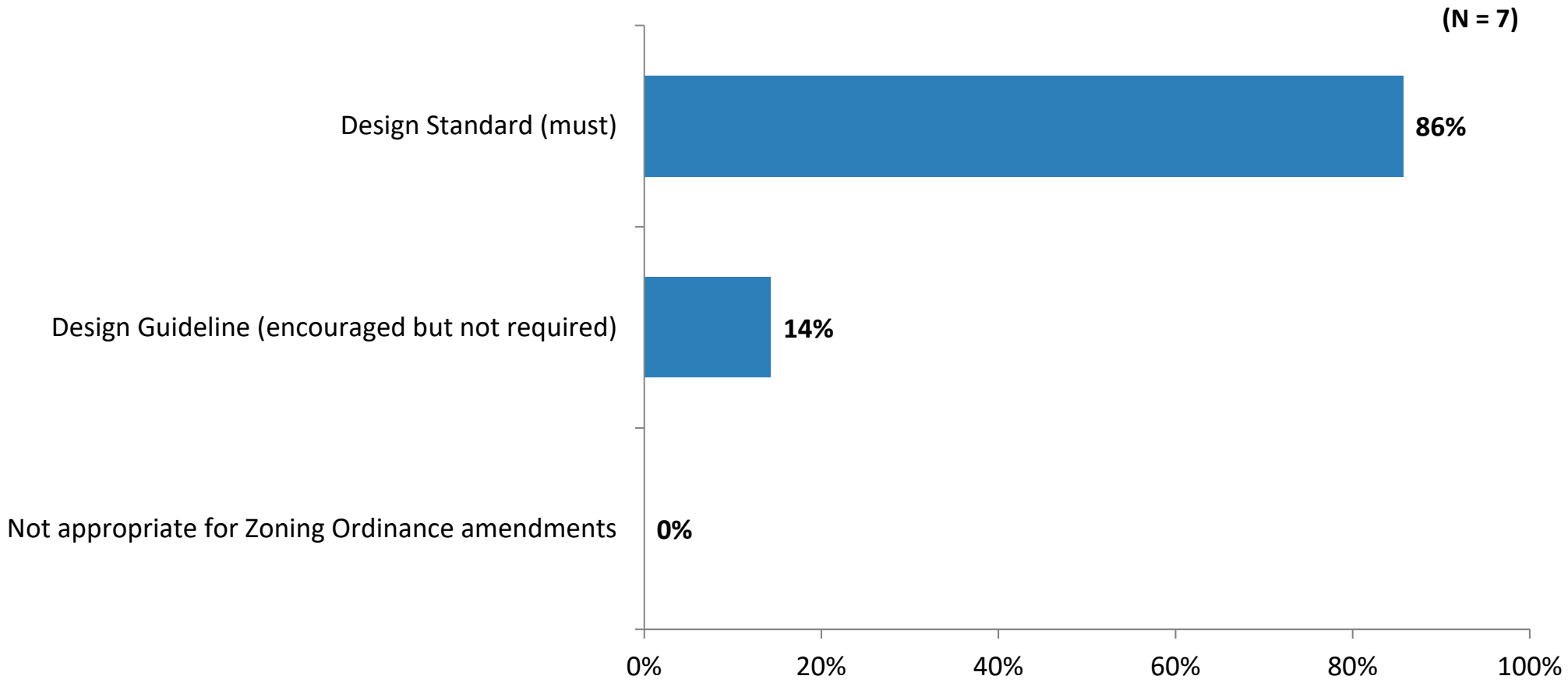

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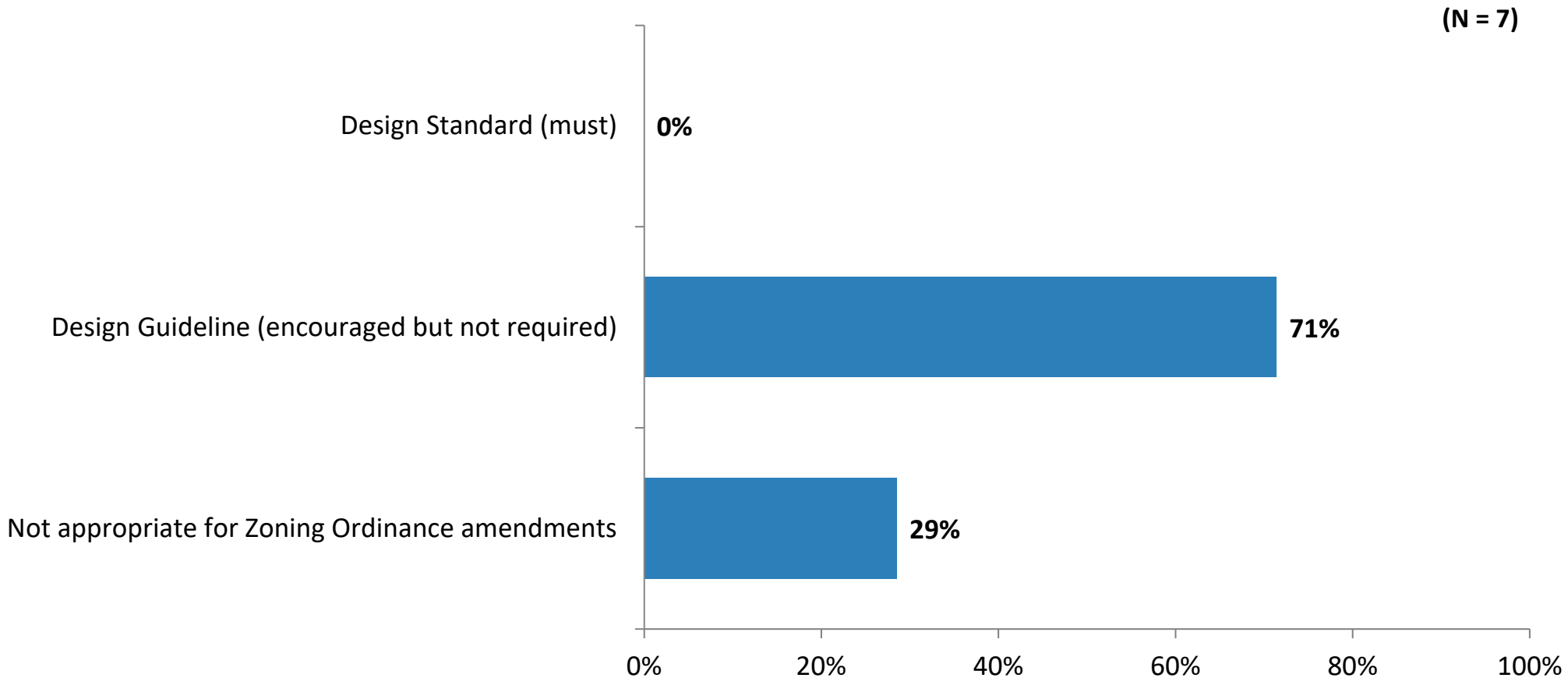

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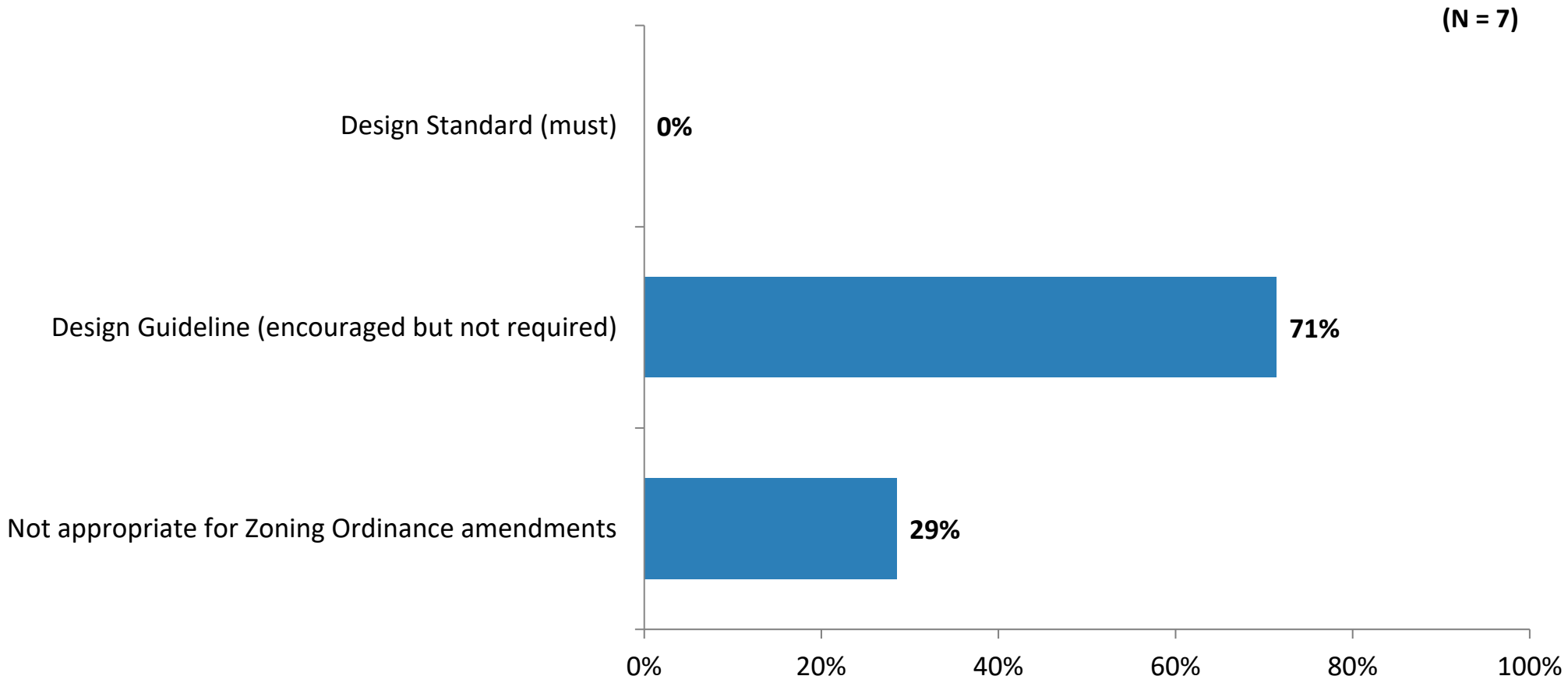

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Do you have anything to add to clarify your choices in the above question?

Response No	Answer text
1	This was really hard because there are so many nuances to the chapters. Some parts of a chapter could be encouraged, while others in the ordinance. Additional stormwater things would be great, but not to replace the retention/detention requirements of new development. And I just think the likelihood of a parking structure is very, very low. Outdoor dining should be allowed by right, but we need to come up with criteria for that. So many parts to deal with!

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Do you have anything to add to clarify your choices in the above question? (Continued)

Response No	Answer text
2	item k: screening and connections are different subjects - screening a must, connections encouraged. item o: mostly 'must, but not all
3	Landscaping plantings should be specified but site furniture does not need to required in every case. Lighting standards for shielding/impact on adjacent properties must be included but all others could be encouraged.

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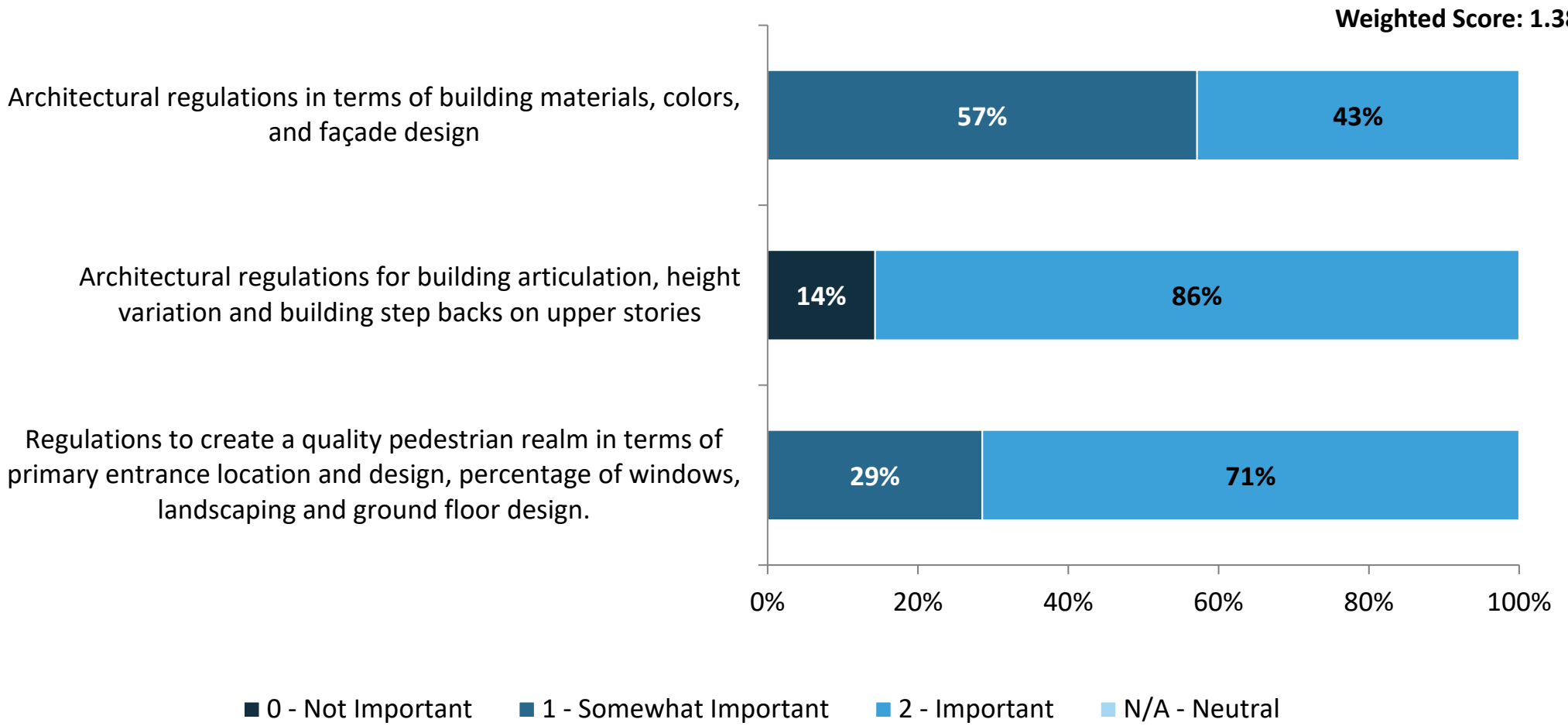
Pleaserank in terms of importance the inclusion of the following types of regulations for new developments, other than single-family, in the Zoning Ordinance amendments to implement DDA Design Guidelines:



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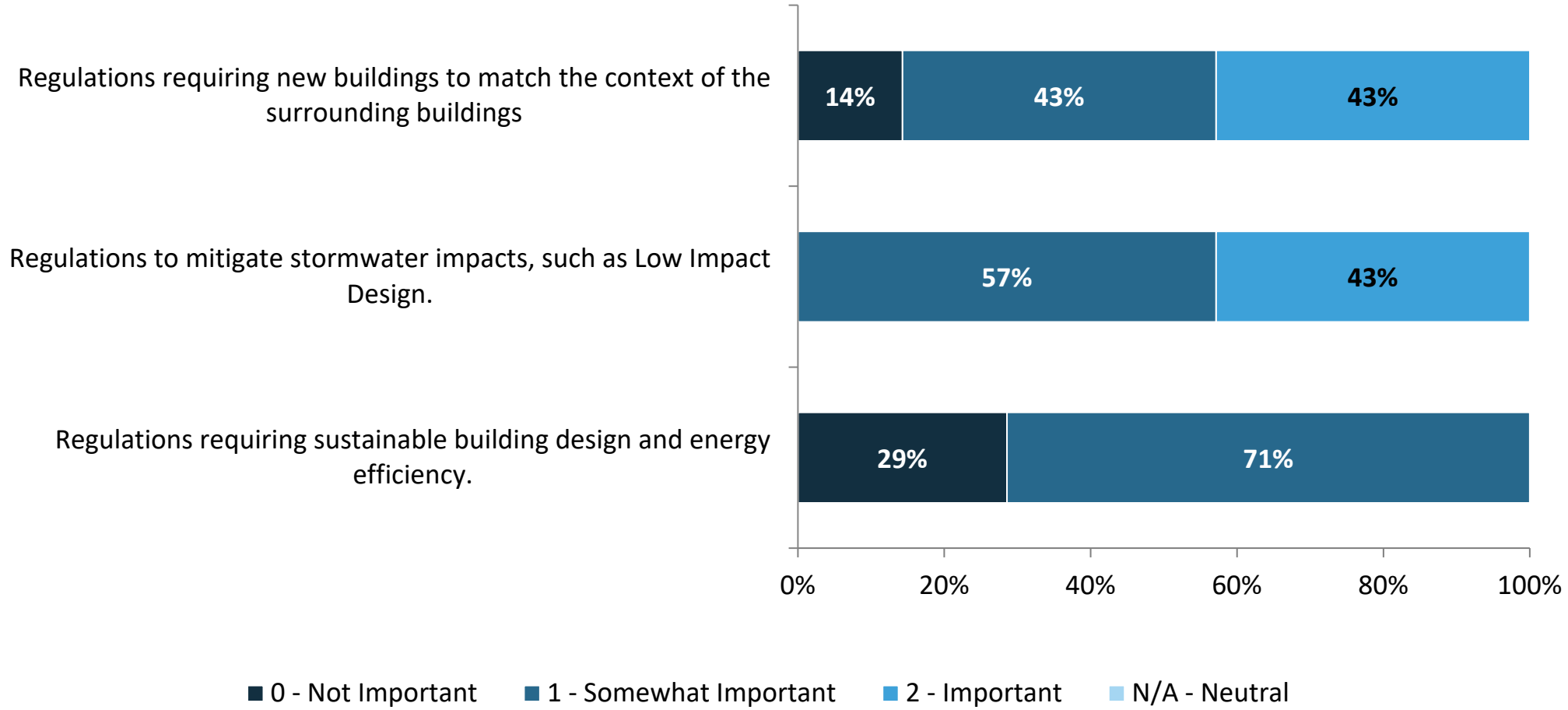

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What additional input would you like to share?

Response No	Answer text
1	We also need to look at allowed uses. Are we sticking with character areas or going with FLU map idea of gateway corridors?
2	don't want to be design police. keep it simple - some communities we are currently working in have ordinances/overlay districts/visions that are almost incomprehensible.

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What additional input would you like to share? (Continued)

Response No	Answer text
5	I think guiding principles to determine if something should be a standard or guide is safety first. This would apply to pedestrians, traffic, general public and any other properties adjacent to the DDA areas. Energy and environmental items would be next to land as a standards with some as guidelines. Aesthetic type items should mainly land in guidelines, but some elements maybe in a grey area-these are probably the ones to debate.

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FIVE - EIGHTHS

2321 WOLCOTT - FERNDALE - MICHIGAN - 48220
WWW.FIVE-EIGHTHS.COM
248 - 891 -2737

February 16, 2022

Megan Masson-Minock
Interim Community Development Director
City of Berkley
3338 Coolidge Hwy.
Berkley, MI 48072

Cc: Matthew Baumgarten, City Manager
Michael Smith, Assistant to the City Manager

Ms. Masson-Minock,

As the applicant for the Site Plan Review application for 2222 W Eleven Mile Rd (Butter Provisioning Center), which was submitted on Friday, January 21st, 2022, I would like to formally request that it be reviewed as a "Sketch Plan" item as outlined by section 138-681(a) of the Berkley Zoning Ordinance at the upcoming Planning Commission on Tuesday, February 22nd, rather than an application for site plan approval. This will allow us to receive initial feedback from the Planning Commission and incorporate any comments/suggestions they may have in our revised submittal documents, which will be updated address the review comments we received on Monday, February 14th. Thank you.

Sincerely,

Grant Jeffries
Principal Architect, Five-Eighths Architecture

CITY OF BERKLEY
COMMUNITY DEVELOPMENT
3338 COOLIDGE HWY, BERKLEY, MICHIGAN 48072

APPLICATION FOR SITE PLAN REVIEW

NOTICE TO APPLICANT: Applications for Site Plan review by the Planning Commission must be submitted to the City of Berkley Building Department in ***substantially complete form*** at least 30 days prior to the Planning Commission's meeting at which the application will be considered. The application must be accompanied by the data specified in the Zoning Ordinance, including fully dimensioned site plans, plus the required review fees.

The Planning Commission meets the fourth Tuesday of the month at 7:00pm in the Council Chambers at the City of Berkley City Hall, 3338 Coolidge Hwy, Berkley, MI 48072.

TO BE COMPLETED BY APPLICANT:

I (We), the undersigned, do hereby respectfully request Site Plan Review and provide the following information to assist in the review:

Project Name: OPERATION GROW, LLC - d.ba. BUTTER PROVISIONING CENTER

Applicant: GRANT JEFFRIES

Mailing Address: 2321 WOLCOTT ST., SUITE B, FERNDALE, MI, 48220

Telephone: [redacted]

Email: GRANT@FIVE-EIGHTHS.COM

Property Owner(s), if different from Applicant: OPERATION GROW LLC

Mailing Address: 3249 WAKEFIELD RD, BERKLEY, MI, 48072

Telephone: [redacted]

Email: DANNY@OPERATIONGROW.BIZ

Applicant's Legal Interest in Property: ARCHITECT

LOCATION OF PROPERTY:

Street Address: 2222 W. ELEVEN MILE ROAD

Nearest Cross Streets: W. ELEVEN MILE & BERKLEY AVE.

Sidwell Number(s): 25-17-358-018

PROPERTY DESCRIPTION:

Provide lot numbers and subdivision: LOTS 284 TO 288 INCLUSIVE, ALSO 1/2 OF VACATED ALLEY ADJACENT OF HANNAN'S WEST ROYAL OAK SUBDIVISION

Property Size (Square Feet): 11,990 (Acres): 0.275

EXISTING ZONING DISTRICT *(please check):*

☐ R-1A	☐ Local Business	☐ Coolidge
☐ R-1B	☐ Office	☐ Downtown
☐ R-1C	☐ Community Centerpiece	☑ Industrial
☐ R-1D	☐ Woodward	☐ Cemetery
☐ RM	☐ Eleven Mile	☐ Parking
☐ RMH	☐ Twelve Mile	

Present Use of Property:
OFFICE

Proposed Use of Property:
MARIHUANA DISPENSARY

Is the property located within the Downtown Development Authority? ☐ Yes ☑ No

PROJECT DESCRIPTION:

RENOVATION OF EXISTING 4,788 S.F. BUILDING TO BE RETAIL MARIHUANA DISPENSARY AND ONE ADDITIONAL TENANT SUITE (TENANT T.B.D.)

Does the proposed project / use of property require Special Land Use approval? ☐ Yes ☑ No

Does the proposed project require Variance(s) from the Zoning Board of Appeals? ☐ Yes ☑ No

If yes, please describe Variances required:

PLEASE COMPLETE THE FOLLOWING CHART:

Type of Development	Number of Units	Gross Floor Area	Number of Parking Spaces On Site	Number of Employees on Largest Shift
Attached Residential				
Office				
Commercial				
Industrial	2	4,237 SF.	13	12
Other				

PROFESSIONALS WHO PREPARED PLANS:

A. Name: GRANT JEFFRIES

Mailing Address: 2321 WOLCOTT ST, SUITE B, FERNDALE, MI, 48220

Telephone: [redacted]

Email: GRANT@FIVE-EIGHTHS.COM

Design Responsibility (engineer, surveyor, architect, etc.): ARCHITECT

B. Name: JOSEPH ANDERSON

Mailing Address: 1025 E MAPLE RD, SUITE 100, BIRMINGHAM, MI, 48009

Telephone: [redacted]

Email: JANDERSON@GIFFELSWEBSTER.COM

Design Responsibility: CIVIL ENGINEER

SUBMIT THE FOLLOWING:

1. Fifteen (15) individually folded copies of the site plans, measuring 24" x 36", sealed by a registered architect, engineer, or surveyor.
2. A pdf file of the site plans, submitted to the Community Development Director.
3. Proof of property ownership (title insurance policy or registered deed with County stamp).
4. Review comments or approval received from County, State or Federal agencies that have jurisdiction over the project, including, but not limited to:

- ☐ Road Commission for Oakland County
- ☐ MI Dept. of Transportation
- ☐ Oakland County Health Division
- ☐ MI Dept. of Environment, Great Lakes & Energy

PLEASE NOTE: The applicant, or a designated representative, **MUST BE PRESENT** at all scheduled meetings, or the Site Plan may be tabled due to lack of representation.

Failure to provide true and accurate information on this application shall provide sufficient grounds to deny approval of a Site Plan Application or to revoke any permits granted subsequent to the site plan approval.

We encourage applicants to make a presentation of the proposed project to the Planning Commission and City Council, as appropriate. To assist in this effort, we have available for your use at meetings a projector, laptop computer and screen. This will allow the Planning Commission and audience to be fully engaged so they can give your project the attention it deserves. Planning Commission meetings are recorded and televised.

PROPERTY OWNER'S APPROVAL: ***(Initial each line)***

_____ I hereby authorize the employees and representatives of the City of Berkley to enter upon and conduct an inspection and investigation of the above-referenced property.

APPLICANT'S ENDORSEMENT: ***(Initial each line)***

GJ All information contained therein is true and accurate to the best of my knowledge.

GJ I acknowledge that the Planning Commission will not review my application unless all information in this application and the Zoning Ordinance has been submitted. I further acknowledge that the City and its employees shall not be held liable for any claims that may arise as a result of acceptance, processing or approval of this site plan application.

GJ I hereby acknowledge that if engineering or other reviews are required, additional fees must be submitted. Should the review fees be greater than the required minimum, sufficient additional charges will be imposed to satisfy the additional review fees. All fee obligations must be satisfied prior to permit approval.

If an application is withdrawn more than three (3) weeks prior to the meeting date, 90% of the fee will be refunded. If the application is withdrawn less than three (3) weeks prior to the meeting, no refund will be given.

Grant Jeffries 1-19-22

Signature of Applicant Date

GRANT JEFFRIES

Applicant Name (Print)

Signature of Applicant Date

Applicant Name (Print)

1-21-2022

Signature of Property Owner Authorizing this Application Date

Daniel Ameri

Property Owner Name (Print)

OFFICE USE ONLY

Received _____ Receipt # _____ Meeting Date _____ Case # _____

Fees: Site Plan Review $600 Façade Change: $200 Revision: $300

Extension $200 Engineering: Multi-family $1,500 + $30/unit
Commercial $1,000

Escrow (New construction) $1,000

WARRANTY DEED

The Grantor	2222 W. 11 Mile, L.L.C., a Michigan limited liability company,
whose address is	26036 Hendrie, Huntington Woods, Michigan 48070,
Conveys and warrants unto Grantee	Operation Grow, LLC, a Michigan limited liability company,
whose address is	3249 Wakefield St., Berkley, Michigan 48072

all of Grantor's right, title and interest in those premises situated in City of Berkley, County of Oakland, Michigan, as more particularly described on the attached Exhibit A, together with all and singular tenements, hereditaments, improvements and appurtenances, if any, belonging or in anywise appertaining thereto, for the consideration of REAL ESTATE TRANSFER TAX VALUATION AFFIDAVIT FILED, the receipt and sufficiency of which are hereby acknowledged, subject to (i) zoning and/or restrictions and prohibitions imposed by governmental authorities; (ii) easements, covenants, conditions and all other matters of record; (iii) taxes and assessments which are a lien, but not yet due and payable; (iv) the rights of tenants as tenants only under unrecorded leases; and (v) the acts or omissions of persons other than Grantor from and after _____ __, 2020, the date of the land contract for which this deed is given in satisfaction hereof (collectively, the "Permitted Exceptions"). Generally accepted agricultural and management practices which may generate noise, dust, odors, and other associated conditions may be used and are protected by the Michigan Right to Farm Act. This property may be located within the vicinity of farm land or a farm operation. Grantor grants the Grantee the right to make all permitted divisions under Section 108 of the Land Divisions Act, Act No. 288 of the Public Acts of 1967.

The Grantor covenants and agrees that as of the date hereof it has not done or suffered to be done anything whereby the property herein conveyed is, or may be, in any manner encumbered or charged, except for the Permitted Exceptions, and Grantor warrants and agrees to defend all or any part of the said property conveyed herein unto Grantee, its successors and assigns, against the claims of all persons claiming by, through or under Grantor, except claims arising from or in connection with any Permitted Exception.

Dated this 7th day of October, 2020

[Signatures on the Following Page]

[*Signature page deed – 2222 W 11 Mile*]

GRANTOR:

2222 W 11 Mile, L.L.C., a Michigan limited liability company

By: _____
Name: KEVIN LEWIS
Its: MANAGER

STATE OF MICHIGAN)
)SS
COUNTY OF OAKLAND)

The foregoing instrument was acknowledged before me this 7th day of OCTOBER, 2020, by KEVIN LEWIS, the MANAGER of 2222 W. 11 Mile, L.L.C. a Michigan limited liability company, who executed the foregoing on behalf of such company.

_____
KRISTIN LANGLANDS
Notary Public, MACOMB County, MICH.
My Commission Expires: AUG 24, 22
Acting in the County of OAKLAND

KRISTIN LANGLANDS
Notary Public - State of Michigan
County of Macomb
My Commission Expires Aug 24, 2022
Acting in the County of OAKLAND

When recorded return to:	Send Subsequent Tax Bills To:	Drafted by:
Grantee	Grantee	Michael Emmer, Esq. Jaffe, Raitt, Heuer, & Weiss 27777 Franklin Road, Suite 2500 Southfield, Michigan 48034

Exhibit A

Legal Description

[See Attached]

Michigan Department of Treasury
2766 (Rev. 05-16)

L-4260

Property Transfer Affidavit

This form is issued under authority of P.A. 415 of 1994. Filing is mandatory.

This form must be filed whenever real estate or some types of personal property are transferred (even if you are not recording a deed). **The completed Affidavit must be filed by the new owner with the assessor for the city or township where the property is located within 45 days of the transfer.** The information on this form is NOT CONFIDENTIAL.

RECEIVED
2020 NOV 12 A 11:07
CITY OF BERKLEY, MI

1. Street Address of Property	2. County	3. Date of Transfer (or land contract signed)
2222 W 11 MILE ROAD	OAKLAND	9/30/2020

4. Location of Real Estate (Check appropriate field and enter name in the space below.)	5. Purchase Price of Real Estate
☒ City ☐ Township ☐ Village BERKLEY	$1,340,000.00
	6. Seller's (Transferor) Name 2222 W. 11 MILE RD, L.L.C.
7. Property Identification Number (PIN). If you don't have a PIN, attach legal description. **PIN.** This number ranges from 10 to 25 digits. It usually includes hyphens and sometimes includes letters. It is on the property tax bill and on the assessment notice. 25-17-358-018	8. Buyer's (Transferee) Name and Mailing Address OPERATION GROW, LLC P.O. BOX 725202, BERKLEY, MI 48072
	9. Buyer's (Transferee) Telephone Number [redacted]

Items 10 - 15 are optional. However, by completing them you may avoid further correspondence.

10. Type of Transfer. **Transfers** include, but are not limited to, deeds, land contracts, transfers involving trusts or wills, certain long-term leases and business interest. See page 2 for list.
☒ Land Contract ☐ Lease ☐ Deed ☐ Other (specify) _____

11. Was property purchased from a financial institution?	12. Is the transfer between related persons?	13. Amount of Down Payment
☐ Yes ☐ No	☐ Yes ☐ No	

14. If you financed the purchase, did you pay market rate of interest?	15. Amount Financed (Borrowed)
☐ Yes ☐ No	

EXEMPTIONS

Certain types of transfers are exempt from uncapping. If you believe this transfer is exempt, indicate below the type of exemption you are claiming. If you claim an exemption, your assessor may request more information to support your claim.

- ☐ Transfer from one spouse to the other spouse
- ☐ Change in ownership solely to exclude or include a spouse
- ☐ Transfer between certain family members *(see page 2)
- ☐ Transfer of that portion of a property subject to a life lease or life estate (until the life lease or life estate expires)
- ☐ Transfer between certain family members of that portion of a property after the expiration or termination of a life estate or life lease retained by transferor ** (see page 2)
- ☐ Transfer to effect the foreclosure or forfeiture of real property
- ☐ Transfer by redemption from a tax sale
- ☐ Transfer into a trust where the settlor or the settlor's spouse conveys property to the trust and is also the sole beneficiary of the trust
- ☐ Transfer resulting from a court order unless the order specifies a monetary payment
- ☐ Transfer creating or ending a joint tenancy if at least one person is an original owner of the property (or his/her spouse)
- ☐ Transfer to establish or release a security interest (collateral)
- ☐ Transfer of real estate through normal public trading of stock
- ☐ Transfer between entities under common control or among members of an affiliated group
- ☐ Transfer resulting from transactions that qualify as a tax-free reorganization under Section 368 of the Internal Revenue Code.
- ☐ Transfer of qualified agricultural property when the property remains qualified agricultural property and affidavit has been filed.
- ☐ Transfer of qualified forest property when the property remains qualified forest property and affidavit has been filed.
- ☐ Transfer of land with qualified conservation easement (land only - not improvements)
- ☐ Other, specify: _____

CERTIFICATION

I certify that the information above is true and complete to the best of my knowledge.

Printed Name		
DANIEL AMORI		
Signature		Date
		11/2/2020
Name and title, if signer is other than the owner	Daytime Phone Number	E-mail Address
MANAGER	[redacted]	DANNY@OPERATIONGROW.BIZ

Instructions:

This form must be filed when there is a transfer of real property or one of the following types of personal property:

- Buildings on leased land.
- Leasehold improvements, as defined in MCL Section 211.8(h).
- Leasehold estates, as defined in MCL Section 211.8(i) and (j).

Transfer of ownership means the conveyance of title to or a present interest in property, including the beneficial use of the property. For complete descriptions of qualifying transfers, please refer to MCL Section 211.27a(6)(a-j).

Excerpts from Michigan Compiled Laws (MCL), Chapter 211

****Section 211.27a(7)(d):** Beginning December 31, 2014, a transfer of that portion of residential real property that had been subject to a life estate or life lease retained by the transferor resulting from expiration or termination of that life estate or life lease, if the transferee is the transferor's or transferor's spouse's mother, father, brother, sister, son, daughter, adopted son, adopted daughter, grandson, or granddaughter and the residential real property is not used for any commercial purpose following the transfer. Upon request by the department of treasury or the assessor, the transferee shall furnish proof within 30 days that the transferee meets the requirements of this subdivision. If a transferee fails to comply with a request by the department of treasury or assessor under this subdivision, that transferee is subject to a fine of $200.00.

***Section 211.27a(7)(u):** Beginning December 31, 2014, a transfer of residential real property if the transferee is the transferor's or the transferor's spouse's mother, father, brother, sister, son, daughter, adopted son, adopted daughter, grandson, or granddaughter and the residential real property is not used for any commercial purpose following the conveyance. Upon request by the department of treasury or the assessor, the transferee shall furnish proof within 30 days that the transferee meets the requirements of this subparagraph. If a transferee fails to comply with a request by the department of treasury or assessor under this subparagraph, that transferee is subject to a fine of $200.00.

Section 211.27a(10): "... the buyer, grantee, or other transferee of the property shall notify the appropriate assessing office in the local unit of government in which the property is located of the transfer of ownership of the property within 45 days of the transfer of ownership, on a form prescribed by the state tax commission that states the parties to the transfer, the date of the transfer, the actual consideration for the transfer, and the property's parcel identification number or legal description."

Section 211.27(5): "Except as otherwise provided in subsection (6), the purchase price paid in a transfer of property is not the presumptive true cash value of the property transferred. In determining the true cash value of transferred property, an assessing officer shall assess that property using the same valuation method used to value all other property of that same classification in the assessing jurisdiction."

Penalties:

Section 211.27b(1): "If the buyer, grantee, or other transferee in the immediately preceding transfer of ownership of property does not notify the appropriate assessing office as required by section 27a(10), the property's taxable value shall be adjusted under section 27a(3) and all of the following shall be levied:

(a) Any additional taxes that would have been levied if the transfer of ownership had been recorded as required under this act from the date of transfer.

(b) Interest and penalty from the date the tax would have been originally levied.

(c) For property classified under section 34c as either industrial real property or commercial real property, a penalty in the following amount:

(i) Except as otherwise provided in subparagraph (ii), if the sale price of the property transferred is $100,000,000.00 or less, $20.00 per day for each separate failure beginning after the 45 days have elapsed, up to a maximum of $1,000.00.

(ii) If the sale price of the property transferred is more than $100,000,000.00, $20,000.00 after the 45 days have elapsed.

(d) For real property other than real property classified under section 34c as industrial real property or commercial real property, a penalty of $5.00 per day for each separate failure beginning after the 45 days have elapsed, up to a maximum of $200.00.

LIBERTY TITLE

PROTECTING PROPERTY RIGHTS SINCE 1974

OWNER'S TITLE INSURANCE

Policy

To the Insured:

Enclosed is your Owner's Title Insurance policy protecting the title to the property you recently purchased. Keep it in a safe place.

If you build, obtain a mortgage or sell this property, new title insurance will be necessary. Because we have researched your property, we will be able to process your title order efficiently. Be sure to direct your lender, broker or builder to Liberty Title Agency so you will receive an appropriate discount on your new policy.

Congratulations on your Purchase!

Tom and Michele Richardson

WESTCOR
LAND TITLE INSURANCE COMPANY

POLICY NO.
[redacted]3104

ALTA OWNER'S POLICY (6-17-06) – MODIFIED
(Michigan Specific)

ISSUED BY

WESTCOR LAND TITLE INSURANCE COMPANY

OWNER'S POLICY OF TITLE INSURANCE

Any notice of claim and any other notice or statement in writing required to be given to the Company under this Policy must be given to the Company at the address shown in Section 18 of the Conditions.

COVERED RISKS

SUBJECT TO THE EXCLUSIONS FROM COVERAGE, THE EXCEPTIONS FROM COVERAGE CONTAINED IN SCHEDULE B, AND THE CONDITIONS, WESTCOR LAND TITLE INSURANCE COMPANY, a South Carolina corporation (the "Company") insures, as of Date of Policy and, to the extent stated in Covered Risks 9 and 10, after Date of Policy, against loss or damage, not exceeding the Amount of Insurance, sustained or incurred by the Insured by reason of:

1. Title being vested other than as stated in Schedule A.
2. Any defect in or lien or encumbrance on the Title. This Covered Risk includes but is not limited to insurance against loss from
   (a) A defect in the Title caused by
      (i) forgery, fraud, undue influence, duress, incompetency, incapacity, or impersonation;
      (ii) failure of any person or Entity to have authorized a transfer or conveyance;
      (iii) a document affecting Title not properly created, executed, witnessed, sealed, acknowledged, notarized, or delivered;
      (iv) failure to perform those acts necessary to create a document by electronic means authorized by law;
      (v) a document executed under a falsified, expired, or otherwise invalid power of attorney;
      (vi) a document not properly filed, recorded, or indexed in the Public Records including failure to perform those acts by electronic means authorized by law; or
      (vii) a defective judicial or administrative proceeding.

COVERED RISKS Continued on next page

IN WITNESS WHEREOF, WESTCOR LAND TITLE INSURANCE COMPANY has caused this policy to be signed and sealed as of the Date of Policy shown in Schedule A,

ISSUED BY: **MI1001 * LIB143173**
Liberty Title Agency, Inc.

111 North Main Street
Ann Arbor, MI 48104

WESTCOR LAND TITLE INSURANCE COMPANY

WESTCOR LAND TITLE INSURANCE COMPANY CORPORATE SEAL 1993 SOUTH CAROLINA

By: Mary O'Donnell
President

Attest:
Secretary

(b) The lien of real estate taxes or assessments imposed on the Title by a governmental authority due or payable, but unpaid.

(c) Any encroachment, encumbrance, violation, variation, or adverse circumstance affecting the Title that would be disclosed by an accurate and complete land survey of the Land. The term "encroachment" includes encroachments of existing improvements located on the Land onto adjoining land, and encroachments onto the Land of existing improvements located on adjoining land.

3. Unmarketable Title.

4. No right of access to and from the Land.

5. The violation or enforcement of any law, ordinance, permit, or governmental regulation (including those relating to building and zoning) restricting, regulating, prohibiting, or relating to

(a) the occupancy, use, or enjoyment of the Land;

(b) the character, dimensions, or location of any improvement erected on the Land;

(c) the subdivision of land; or

(d) environmental protection

if a notice, describing any part of the Land, is recorded in the Public Records setting forth the violation or intention to enforce, but only to the extent of the violation or enforcement referred to in that notice.

6. An enforcement action based on the exercise of a governmental police power not covered by Covered Risk 5 if a notice of the enforcement action, describing any part of the Land, is recorded in the Public Records, but only to the extent of the enforcement referred to in that notice.

7. The exercise of the rights of eminent domain if a notice of the exercise, describing any part of the Land, is recorded in the Public Records.

8. Any taking by a governmental body that has occurred and is binding on the rights of a purchaser for value without Knowledge.

9. Title being vested other than as stated in Schedule A or being defective

(a) as a result of the avoidance in whole or in part, or from a court order providing an alternative remedy, of a transfer of all or any part of the title to or any interest in the Land occurring prior to the transaction vesting Title as shown in Schedule A because that prior transfer constituted a fraudulent or preferential transfer under federal bankruptcy, state insolvency, or similar creditors' rights laws; or

(b) because the instrument of transfer vesting Title as shown in Schedule A constitutes a preferential transfer under federal bankruptcy, state insolvency, or similar creditors' rights laws by reason of the failure of its recording in the Public Records

(i) to be timely, or

(ii) to impart notice of its existence to a purchaser for value or to a judgment or lien creditor.

10. Any defect in or lien or encumbrance on the Title or other matter included in Covered Risks 1 through 9 that has been created or attached or has been filed or recorded in the Public Records subsequent to Date of Policy and prior to the recording of the deed or other instrument of transfer in the Public Records that vests Title as shown in Schedule A.

The Company will also pay the costs, attorneys' fees, and expenses incurred in defense of any matter insured against by this Policy, but only to the extent provided in the Conditions.

EXCLUSIONS FROM COVERAGE

The following matters are expressly excluded from the coverage of this policy, and the Company will not pay loss or damage, costs, attorneys' fees, or expenses that arise by reason of:

1. (a) Any law, ordinance, permit, or governmental regulation (including those relating to building and zoning) restricting, regulating, prohibiting, or relating to

(i) the occupancy, use, or enjoyment of the Land;

(ii) the character, dimensions, or location of any improvement erected on the Land;

(iii) the subdivision of land; or

(iv) environmental protection; or the effect of any violation of these laws, ordinances, or governmental regulations. This Exclusion 1(a) does not modify or limit the coverage provided under Covered Risk 5.

(b) Any governmental police power. This Exclusion 1(b) does not modify or limit the coverage provided under Covered Risk 6.

2. Rights of eminent domain. This Exclusion does not modify or limit the coverage provided under Covered Risk 7 or 8.

3. Defects, liens, encumbrances, adverse claims, or other matters

(a) created, suffered, assumed, or agreed to by the Insured Claimant;

(b) not Known to the Company, not recorded in the Public Records at Date of Policy, but Known to the Insured Claimant and not disclosed in writing to the Company by the Insured Claimant prior to the date the Insured Claimant became an Insured under this policy;

(c) resulting in no loss or damage to the Insured Claimant;

(d) attaching or created subsequent to Date of Policy (however, this does not modify or limit the coverage provided under Covered Risk 9 and 10); or

(e) resulting in loss or damage that would not have been sustained if the Insured Claimant had paid value for the Title.

4. Any claim, by reason of the operation of federal bankruptcy, state insolvency, or similar creditors' rights laws, that the transaction vesting the Title as shown in Schedule A, is

(a) a fraudulent conveyance or fraudulent transfer; or

(b) a preferential transfer for any reason not stated in Covered Risk 9 of this policy.

5. Any lien on the Title for real estate taxes or assessments imposed by governmental authority and created or attaching between Date of Policy and the date of recording of the deed or other instrument of transfer in the Public Records that vests Title as shown in Schedule A.

CONDITIONS

1. DEFINITION OF TERMS

The following terms when used in this policy mean:

(a) "Amount of Insurance": The amount stated in Schedule A, as may be increased or decreased by endorsement to this policy, increased by Section 8(b), or decreased by Sections 10 and 11 of these Conditions.

(b) "Date of Policy": The date designated as "Date of Policy" in Schedule A.

(c) "Entity": A corporation, partnership, trust, limited liability company, or other similar legal entity.

(d) "Insured": The Insured named in Schedule A.

(i) The term "Insured" also includes

(A) successors to the Title of the Insured by operation of law as distinguished from purchase, including heirs, devisees, survivors, personal representatives, or next of kin;

(B) successors to an Insured by dissolution, merger, consolidation, distribution, or reorganization;

(C) successors to an Insured by its conversion to another kind of Entity;

(D) a grantee of an Insured under a deed delivered without payment of actual valuable consideration conveying the Title

(1) if the stock, shares, memberships, or other equity interests of the grantee are wholly-owned by the named Insured,

(2) if the grantee wholly owns the named Insured,

(3) if the grantee is wholly-owned by an affiliated Entity of the named Insured, provided the affiliated Entity and the named Insured are both wholly-owned by the same person or Entity, or

(4) if the grantee is a trustee or beneficiary of a trust created by a written instrument established by the Insured named in Schedule A for estate planning purposes.

(ii) With regard to (A), (B), (C), and (D) reserving, however, all rights and defenses as to any successor that the Company would have had against any predecessor Insured.

(e) "Insured Claimant": An Insured claiming loss or damage.

(f) "Knowledge" or "Known": Actual knowledge, not constructive knowledge or notice that may be imputed to an Insured by reason of the Public Records or any other records that impart constructive notice of matters affecting the Title.

(g) "Land" The land described in Schedule A, and affixed improvements that by law constitute real property. The term "Land" does not include any property beyond the lines of the area described in Schedule A, nor any right, title, interest, estate, or easement in abutting streets, roads, avenues, alleys, lanes, ways, or waterways, but this does not modify or limit the extent that a right of access to and from the Land is insured by this policy.

(h) "Mortgage": Mortgage, deed of trust, trust deed, or other secu-rity instrument, including one evidenced by electronic means authorized by law.

(i) "Public Records": Records established under state statutes at Date of Policy for the purpose of imparting constructive notice of matters relating to real property to purchasers for value and without Knowledge. With respect to Covered Risk 5(d), "Public Records" shall also include environmental protection liens filed in the records of the clerk of the United States District Court for the district where the Land is located.

(j) "Title": The estate or interest described in Schedule A.

(k) "Unmarketable Title": Title affected by an alleged or apparent matter that would permit a prospective purchaser or lessee of the Title or lender on the Title to be released from the obligation to purchase, lease, or lend if there is a contractual condition requiring the delivery of marketable title.

2. CONTINUATION OF INSURANCE

The coverage of this policy shall continue in force as of Date of Policy in favor of an Insured, but only so long as the Insured retains an estate or interest in the Land, or holds an obligation secured by a purchase money Mortgage given by a purchaser from the Insured, or only so long as the Insured shall have liability by reason of warranties in any transfer or conveyance of the Title. This policy shall not continue in force in favor of any purchaser from the Insured of either (i) an estate or interest in the Land, or (ii) an obligation secured by a purchase money Mortgage given to the Insured.

3. NOTICE OF CLAIM TO BE GIVEN BY INSURED CLAIMANT

The Insured shall notify the Company promptly in writing (i) in case of any litigation as set forth in Section 5(a) of these Conditions, (ii) in case Knowledge shall come to an Insured hereunder of any claim of title or interest that is adverse to the Title, as insured, and that might cause loss or damage for which the Company may be liable by virtue of this policy, or (iii) if the Title, as insured, is rejected as Unmarketable Title. If the Company is prejudiced by the failure of the Insured Claimant to provide prompt notice, the Company's liability to the Insured Claimant under the policy shall be reduced to the extent of the prejudice.

4. PROOF OF LOSS

In the event the Company is unable to determine the amount of loss or damage, the Company may, at its option, require as a condition of payment that the Insured Claimant furnish a signed proof of loss. The proof of loss must describe the defect, lien, encumbrance, or other matter insured against by this policy that constitutes the basis of loss or damage and shall state, to the extent possible, the basis of calculating the amount of the loss or damage.

5. DEFENSE AND PROSECUTION OF ACTIONS

(a) Upon written request by the Insured, and subject to the options contained in Section 7 of these Conditions, the Company, at its own cost and without unreasonable delay, shall provide for the defense of an Insured in litigation in which any third party asserts a claim covered by this policy adverse to the Insured. This obligation is limited to only those stated causes of action alleging matters insured against by this policy. The Company shall have the right to select counsel of its choice (subject to the right of the Insured to object for reasonable cause) to represent the Insured as to those stated causes of action. It shall not be liable for and will not pay the fees of any other counsel. The Company will not pay any fees, costs, or expenses incurred by the Insured in the defense of those causes of action that allege matters not insured against by this policy.

(b) The Company shall have the right, in addition to the options contained in Section 7 of these Conditions, at its own cost, to institute and prosecute any action or proceeding or to do any other act that in its opinion may be necessary or desirable to establish the Title, as insured, or to prevent or reduce loss or damage to the Insured. The Company may take any appropriate action under the terms of this policy, whether or not it shall be liable to the Insured. The exercise of these rights shall not be an admission of liability or waiver of any provision of this policy. If the Company exercises its rights under this subsection, it must do so diligently.

(c) Whenever the Company brings an action or asserts a defense as required or permitted by this policy, the Company may pursue the litigation to a final determination by a court of competent jurisdiction, and it expressly reserves the right, in its sole discretion, to appeal any adverse judgment or order.

6. DUTY OF INSURED CLAIMANT TO COOPERATE

(a) In all cases where this policy permits or requires the Company to prosecute or provide for the defense of any action or proceeding and any appeals, the Insured shall secure to the Company the right to so prosecute or provide defense in the action or proceeding, including the right to use, at its option, the name of the Insured for this purpose. Whenever requested by the Company, the Insured, at the Company's expense, shall give the Company all reasonable aid (i) in securing evidence, obtaining witnesses, prosecuting or defending the action or proceeding, or effecting settlement, and (ii) in any other lawful act that in the opinion of the Company may be necessary or desirable to establish the Title or any other matter as insured. If the Company is prejudiced by the failure of the Insured to furnish the required cooperation, the Company's obligations to the Insured under the policy shall terminate, including any liability or obligation to defend, prosecute, or continue any litigation, with regard to the matter or matters requiring such cooperation.

(b) The Company may reasonably require the Insured Claimant to submit to examination under oath by any authorized representative of the Company and to produce for examination, inspection, and copying, at such reasonable times and places as may be designated by the authorized representative of the Company, all records, in whatever medium maintained, including books, ledgers, checks, memoranda, correspondence, reports, e-mails, disks, tapes, and videos whether bearing a date before or after Date of Policy, that reasonably pertain to the loss or damage. Further, if requested by any authorized representative of the Company, the Insured Claimant shall grant its permission, in writing, for any authorized representative of the Company to examine, inspect, and copy all of these records in the custody or control of a third party that reasonably pertain to the loss or damage. All information designated as confidential by the Insured Claimant provided to the Company pursuant to this Section shall not be disclosed to others unless, in the reasonable judgment of the Company, it is necessary in the administration of the claim. Failure of the Insured Claimant to submit for examination under oath, produce any reasonably requested information, or grant permission to secure reasonably necessary information from third parties as required in this subsection, unless prohibited by law or governmental regulation, shall terminate any liability of the Company under this policy as to that claim.

7. OPTIONS TO PAY OR OTHERWISE SETTLE CLAIMS; TERMINATION OF LIABILITY

In case of a claim under this policy, the Company shall have the following additional options:

(a) To Pay or Tender Payment of the Amount of Insurance.

To pay or tender payment of the Amount of Insurance under this policy together with any costs, attorneys' fees, and expenses in-curred by the Insured Claimant

that were authorized by the Company up to the time of payment or tender of payment and that the Company is obligated to pay.

Upon the exercise by the Company of this option, all liability and obligations of the Company to the Insured under this policy, other than to make the payment required in this subsection, shall termi-nate, including any liability or obligation to defend, prosecute, or continue any litigation.

(b) To Pay or Otherwise Settle With Parties Other Than the Insured or With the Insured Claimant.

(i) To pay or otherwise settle with other parties for or in the name of an Insured Claimant any claim insured against under this policy. In addition, the Company will pay any costs, attorneys' fees, and expenses incurred by the Insured Claimant that were authorized by the Company up to the time of payment and that the Company is obligated to pay; or

(ii) To pay or otherwise settle with the Insured Claimant the loss or damage provided for under this policy, together with any costs, attorneys' fees, and expenses incurred by the Insured Claimant that were authorized by the Company up to the time of payment and that the Company is obligated to pay.

Upon the exercise by the Company of either of the options provided for in subsections (b)(i) or (ii), the Company's obligations to the Insured under this policy for the claimed loss or damage, other than the payments required to be made, shall terminate, including any liability or obligation to defend, prosecute, or continue any litigation.

8. DETERMINATION AND EXTENT OF LIABILITY

This policy is a contract of indemnity against actual monetary loss or damage sustained or incurred by the Insured Claimant who has suffered loss or damage by reason of matters insured against by this policy.

(a) The extent of liability of the Company for loss or damage under this policy shall not exceed the lesser of

(i) the Amount of Insurance; or

(ii) the difference between the value of the Title as insured and the value of the Title subject to the risk insured against by this policy.

(b) If the Company pursues its rights under Section 5 of these Conditions and is unsuccessful in establishing the Title, as insured,

(i) the Amount of Insurance shall be increased by 10%, and

(ii) the Insured Claimant shall have the right to have the loss or damage determined either as of the date the claim was made by the Insured Claimant or as of the date it is settled and paid.

(c) In addition to the extent of liability under (a) and (b), the Company will also pay those costs, attorneys' fees, and expenses incurred in accordance with Sections 5 and 7 of these Conditions.

9. LIMITATION OF LIABILITY

(a) If the Company establishes the Title, or removes the alleged defect, lien, or encumbrance, or cures the lack of a right of access to or from the Land, or cures the claim of Unmarketable Title, all as insured, in a reasonably diligent manner by any method, including litigation and the completion of any appeals, it shall have fully performed its obligations with respect to that matter and shall not be liable for any loss or damage caused to the Insured.

(b) In the event of any litigation, including litigation by the Company or with the Company's consent, the Company shall have no liability for loss or damage until there has been a final determination by a court of competent jurisdiction, and disposition of all appeals, adverse to the Title, as insured.

(c) The Company shall not be liable for loss or damage to the Insured for liability voluntarily assumed by the Insured in settling any claim or suit without the prior written consent of the Company.

10. REDUCTION OF INSURANCE; REDUCTION OR TERMINATION OF LIABILITY

All payments under this policy, except payments made for costs, attorneys' fees, and expenses, shall reduce the Amount of Insurance by the amount of the payment.

11. LIABILITY NONCUMULATIVE

The Amount of Insurance shall be reduced by any amount the Company pays under any policy insuring a Mortgage to which exception is taken in Schedule B or to which the Insured has agreed, assumed, or taken subject, or which is executed by an Insured after Date of Policy and which is a charge or lien on the Title, and the amount so paid shall be deemed a payment to the Insured under this policy.

12. PAYMENT OF LOSS

When liability and the extent of loss or damage have been definitely fixed in accordance with these Conditions, the payment shall be made within 30 days.

13. RIGHTS OF RECOVERY UPON PAYMENT OR SETTLEMENT

(a) Whenever the Company shall have settled and paid a claim under this policy, it shall be subrogated and entitled to the rights of the Insured Claimant in the Title and all other rights and remedies in respect to the claim that the Insured Claimant has against any person or property, to the extent of the amount of any loss, costs, attorneys' fees, and expenses paid by the Company. If requested by the Company, the Insured Claimant shall execute documents to evidence the transfer to the Company of these rights and remedies. The Insured Claimant shall permit the Company to sue, compromise, or settle in the name of the Insured Claimant and to use the name of the Insured Claimant in any transaction or litigation involving these rights and remedies.

If a payment on account of a claim does not fully cover the loss of the Insured Claimant, the Company shall defer the exercise of its right to recover until after the Insured

Claimant shall have recovered its loss.

(b) The Company's right of subrogation includes the rights of the Insured to indemnities, guaranties, other policies of insurance, or bonds, notwithstanding any terms or conditions contained in those instruments that address subrogation rights.

14. INTENTIONALLY OMITTED

15. LIABILITY LIMITED TO THIS POLICY; POLICY ENTIRE CONTRACT

(a) This policy together with all endorsements, if any, attached to it by the Company is the entire policy and contract between the Insured and the Company. In interpreting any provision of this policy, this policy shall be construed as a whole.

(b) Any claim of loss or damage that arises out of the status of the Title or by any action asserting such claim shall be restricted to this policy.

(c) Any amendment of or endorsement to this policy must be in writing and authenticated by an authorized person, or expressly incorporated by Schedule A of this policy.

(d) Each endorsement to this policy issued at any time is made a part of this policy and is subject to all of its terms and provisions. Except as the endorsement expressly states, it does not (i) modify any of the terms and provisions of the policy, (ii) modify any prior endorsement, (iii) extend the Date of Policy, or (iv) increase the Amount of Insurance.

16. SEVERABILITY

In the event any provision of this policy, in whole or in part, is held invalid or unenforceable under applicable law, the policy shall be deemed not to include that provision or such part held to be invalid, but all other provisions shall remain in full force and effect.

17. CHOICE OF LAW; FORUM

(a) Choice of Law: The Insured acknowledges the Company has underwritten the risks covered by this policy and determined the premium charged therefor in reliance upon the law affecting interests in real property and applicable to the interpretation, rights, remedies, or enforcement of policies of title insurance of the jurisdiction where the Land is located.

Therefore, the court or an arbitrator shall apply the law of the jurisdiction where the Land is located to determine the validity of claims against the Title that are adverse to the Insured and to interpret and enforce the terms of this policy. In neither case shall the court or arbitrator apply its conflicts of law principles to determine the applicable law.

(b) Choice of Forum: Any litigation or other proceeding brought by the Insured against the Company must be filed only in a state or federal court within the United States of America or its territories having appropriate jurisdiction.

18. NOTICES, WHERE SENT

Any notice of claim and any other notice or statement in writing required to be given to the Company under this policy must be given to the Company at: Westcor Land Title Insurance Company, Attn.: Claims, 875 Concourse Parkway South, Suite 200, Maitland, FL 32751. Phone: (407) 629-5842.

19. NOTICE REQUIREMENTS FOR MICHIGAN

Notwithstanding any other Condition to the contrary, notice given by or on behalf of the insured to any authorized agent of the insurer within this state, with particulars sufficient to identify the insured shall be deemed to be notice to the insurer. Also, failure to give any notice required to be given by such policy within the time specified shall not invalidate any claim made by the insured if it shall be shown not to have been reasonably possible to give such notice within the prescribed time and that notice was given as soon as was reasonably possible.

Liberty Title Agency
(248) 434-5560

Westcor Land Title Insurance Company
SCHEDULE A

File Number: LIB143173 Policy Number: [redacted]3104
Amount of Insurance: $1,340,000.00

Policy Effective Date: October 7, 2020 at 8:00AM
or date of recording of insured Deed, whichever is later.

1. Name of Insured:

   Operation Grow, LLC, a Michigan limited liability company

2. The estate or interest in the land which is covered by this policy is:

   Land Contract Purchaser's Interest as disclosed by Memorandum of Land Contract dated October 7, 2020

3. Title to the estate or interest in the land is vested in:

   Operation Grow, LLC, a Michigan limited liability company

4. The land referred to in this Policy is located in the City of Berkley, County of Oakland, State of Michigan, and described as follows:

   SEE SCHEDULE C ATTACHED HERETO

Westcor Land Title Insurance Company

By: _____
Liberty Title Agency

Liberty Title Agency
(248) 434-5560

Westcor Land Title Insurance Company
SCHEDULE B

File Number: LIB143173 Policy Number: [redacted]3104

EXCEPTIONS FROM COVERAGE

This policy does not insure against loss or damage (and the Company will not pay costs, attorneys' fee or expenses) which arise be reason of:

1. The Fee Simple Interest of 2222 W. 11 Mile LLC.

2. Any loss or damage sustained by the insured resulting from any unpaid water or sewer bill.

3. Rights of tenants under unrecorded leases, if any.

4. Easements over that portion of subject property included in the vacated alley.

5. Building and use Restrictions as recorded in Liber 1785, page 309; Liber 3219, page 628; Liber 663, page 574; Liber 739, page 11; Liber 3267, page 597, Oakland County Records, but omitting any covenant or Restriction based on race, color, religion, sex, handicap, familial status, or national origin.

6. Without limiting, modifying, abridging or negating any provision of the Exclusions From Coverage stated in this Policy or any other exception included in this Schedule B, and as a supplement and addition thereto, this Policy does not insure or provide title insurance coverage directly or indirectly for or against any and all consequences and effects, legal, equitable, practical or otherwise, civil or criminal, of any violation or alleged violation of any United States federal, state, county, municipal or local laws, statutes, ordinances or regulations or any actual or threatened action, court order or mandate for the enforcement thereof, relating to or governing the use, processing, manufacture, growth, possession, distribution, sale or any other activity on, about, or relating to or concerning the land, title thereto or any interest therein, of any Schedule I drug as defined by the United States Controlled Substances Act, including, without limitation, marijuana and/or cannabis, and any component, derivative or product thereof. This Policy insures title only; nothing contained in this Policy shall be construed to insure the subject premises for any particular use.

7. Encroachments, overlaps, boundary line disputes, and any other matters which would be discovered by an accurate survey and inspection of the premises.

8. Taxes and assessments that become a lien against the property after date of closing. The Company assumes no liability for tax increases occasioned by retroactive revaluation, changes in the land usage or loss of any homestead exemption status for the insured premises.

Liberty Title Agency
(248) 434-5560

Westcor Land Title Insurance Company
SCHEDULE C

File Number: LIB143173 Policy Number: [redacted]3104

Land is located in City of Berkley, County of Oakland, State of Michigan, and described as follows:

Lots 284, 285, 286, 287 and 288, Hannan's West Royal Oak Subdivision, as recorded in Liber 14, Page 3 of Plats, Oakland County Records.

Commonly known as: 2222 W 11 Mile Rd. Berkley, MI 48072-3048

WESTCOR
LAND TITLE INSURANCE COMPANY

Notice of Privacy Policy

of

Westcor Land Title Insurance Company

Westcor Land Title Insurance Company ("WLTIC") values its customers and is committed to protecting the privacy of personal information. In keeping with that philosophy, we have developed a Privacy Policy, set out below, that will ensure the continued protection of your nonpublic personal information and inform you about the measures WLTIC takes to safeguard that information.

Who is Covered

We provide our Privacy Policy to each customer when they purchase an WLTIC title insurance policy. Generally, this means that the Privacy Policy is provided to the customer at the closing of the real estate transaction.

Information Collected

In the normal course of business and to provide the necessary services to our customers, we may obtain nonpublic personal information directly from the customer, from customer-related transactions, or from third parties such as our title insurance agents, lenders, appraisers, surveyors or other similar entities.

Access to Information

Access to all nonpublic personal information is limited to those employees who have a need to know in order to perform their jobs. These employees include, but are not limited to, those in departments such as legal, underwriting, claims administration and accounting.

Information Sharing

Generally, WLTIC does not share nonpublic personal information that it collects with anyone other than its policy issuing agents as needed to complete the real estate settlement services and issue its title insurance policy as requested by the consumer. WLTIC may share nonpublic personal information as permitted by law with entities with whom WLTIC has a joint marketing agreement. Entities with whom WLTIC has a joint marketing agreement have agreed to protect the privacy of our customer's nonpublic personal information by utilizing similar precautions and security measures as WLTIC uses to protect this information and to use the information for lawful purposes. WLTIC, however, may share information as required by law in response to a subpoena, to a government regulatory agency or to prevent fraud.

Information Security

WLTIC, at all times, strives to maintain the confidentiality and integrity of the personal information in its possession and has instituted measures to guard against its unauthorized access. We maintain physical, electronic and procedural safeguards in compliance with federal standards to protect that information.

The WLTIC Privacy Policy can also be found on WLTIC's website at www.wltic.com.

operation grow, LLC - d.b.a. butter provisioning center

project address: 2222 w eleven mile road / berkley / mi / 48072

site plan review drawings (NOT FOR CONSTRUCTION) 01 / 21 / 2022

project title 3

These drawings are not intened to be construction documents and therefore are NOT FOR CONSTRUCTION.

Should a business license be awarded to this applicant, fully engineered Site Plan Review Drawings to be produced and submitted to the city for review and approval.

Once the Site Plan Approval process is complete, a set of Construction Documents to be produced with engineered mechanical, electrical, and plumbing drawings produced by an MEP consulting firm in order to obtain a building permit for construction.

project notes 11

12	9	6	3
11	8	5	2
10	7	4	1

use the sheet index grid as a reference to locate drawings on individual sheets within the set.

sheet index 8



NOTE: Refer to sheet A/9.01 for a larger version of this rendering as well as additional views and photos of existing building

preview rendering 2

2015 michigan building code, mbc 2015

2015 michigan mechanical code, mmc 2015

2015 michigan plumbing code, mpc 2015

2014 national electrical code w/ state amendments, nec 2014

ASHRAE 90.1 (2013) Standard

accessibility: michigan barrier free design law, p.a. 1966 as amended and the icc / ansi a117.1-2009 standard as referenced from chapter 11 of the 2015 michigan building code.

applicable codes 7

architect:

five / eighths
2321 Wolcott Street
Ferndale / MI / 48220

contact / Grant Jeffries
t: 248 / 981 / 8744
e: grant@5-8ths.com

civil engineer:

giffels webster
1025 E Maple / Suite 100
Birmingham / MI / 48009

contact / Joseph Anderson
t: 248 / 852 / 3100
e: janderson@giffelswebster.com

owner:

Operation Grow LLC
d.b.a. butter provisioning center
3249 Wakefield Rd
Berkley / MI / 48072

contact / Daniel Amori
t: 517 / 881 / 2216
e: danny@operationgrow.biz

project directory 4

G/ 0.01	title sheet
G/ 0.02	general notes
C/ 1.10	area plan / existing
C/ 1.11	topo survey / existing
C/ 1.20	site plan / proposed
C/ 1.21	engineering site plan
C/ 1.30	site plan / landscape
C/ 7.01	details / site
A/ 1.01	floor plan / proposed
A/ 1.40	roof plan
A/ 2.01	elevations / exterior
A/ 9.01	exterior renderings
A/ 9.02	exterior renderings
E/ 1.11	exterior lighting / photometrics
E/ 1.12	exterior lighting / cut sheets

sheet list 1

five / eighths

2321 Wolcott Street
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www.5-8ths.com

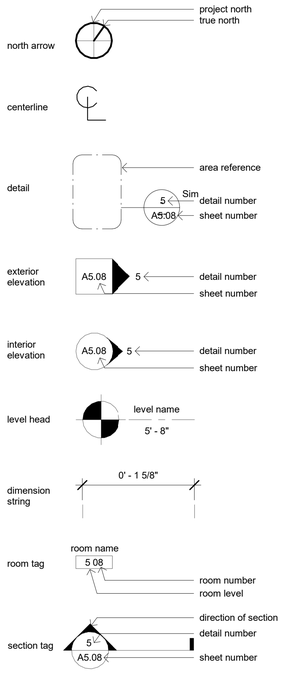
operation grow, LLC - d.b.a. butter provisioning center
2222 w eleven mile road / berkley / mi / 48072

title sheet
site plan review drawings (NOT FOR CONSTRUCTION)
sheet number 1 of 15

date
01 / 21 / 2022

STATE OF MICHIGAN
GRANT A. JEFFRIES
ARCHITECT
No. 1301082494
LICENSED ARCHITECT

G/ 0.01



symbols 8

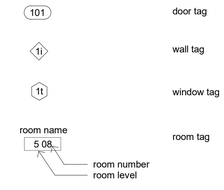
/	and
>	angle
@	at
+	height above
ABV	above
ADJ	adjustable
AP	access panel
APPROX	approximate
BB	baseboard
BEL	below
BO	bottom of
BR	broiler
CB	casework
CMU	concrete masonry unit
D	depth
DF	deep fryer
DIM	dimension
DN	down
DW	dishwasher
(e)	existing
E	east
EF	exhaust fan
ELEC	electric
EP	electrical panel
EQ	equal
EXT	exterior
FC	faucet
FD	floor drain
FL	floor
FF	finish floor
GA	gauge
GB	grab bar
GD	garbage diosposal
GG	gas griddle
GR	grade
GW	grease waste dumpster
GYP	gypsum wallboard
H	height
HVAC	heating, ventilation, and air conditioning
INCL	include
INT	interior
LT	light
LV	lavatory
MAX	maximum
MIN	minimum
MR	mirror
MT	metal
N	north
O.C.	on center
PD	paper dispenser
POS	point of service
PR	printer
PROV	provide
PT	paint
RCP	reflected ceiling plan
RF	refrigerator
REF	reference
RK	rack
S	south
SF	square footage
SK	sink
SIM	similar
SP	speaker
SPEC	specified
ST	stone
TC	trash cart
TL	tile
TO	top of
TP	toilet paper
TR	trash can
TV	television
TYP	typical
VH	ventilation hood
VIF	verify in field
W	west
W	width
W/	with
WC	water closet
WD	wood
WH	water heater
W/O	without

abbreviations 7



NOTE: 1716 Coolidge Hwy and 2290 W 11 Mile Rd are sites with which shared parking agreements have been secured by the applicant. Refer to the application documents and sheets C/1.10 and C/1.20 for more info on parking requirements. All required off-street parking is provided for on-site, these agreements are in excess of the required amount of spaces.

vicinity map 1" = 800' 2



legend / tags 10

Renovation of an existing building with a non-conforming use to be a new multi-tenant building. One suite will be used for a marihuana provisioning center named "butter", the other suite will be rented out for Industrial Zone approved warehouse use, by a separate, non-marihuana related business tenant.

The renovation includes all new mechanical, plumbing, and electrical system upgrades to more efficient systems, an all new layout and finishes on the interior, a new overhead door for the warehouse suite, new openings for aluminum & glass curtain walls to increase natural light within the building, and installation of a green roof.

Site improvements include a new parking lot paved with pervious pavers, a new enclosure for trash and recycling containers, new masonry screenwalls, new native landscaping, rain harvesting barrels, and new streetscape elements such as bike racks, benches, bollards, and planter boxes.

project description 4

project name:
operation grow, LLC - d.b.a. butter provisioning center

project address:
2222 w eleven mile road / berkley / mi / 48072

property information:

PIN:	25-17-358-018
zoning:	Industrial
type of construction:	IIIB
lot area:	0.275 acres
year built:	1964
# of buildings:	1
# of stories:	1
building area:	4,817 SF existing; 4,237 SF proposed
height:	15'-4"
parking spots:	13 on-site + 10 w/ shared parking agreements
sprinklered:	no

project information 1

five / eighths

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www.5-8ths.com

operation grow, LLC - d.b.a.
butter provisioning center
2222 w eleven mile road / berkley / mi / 48072

general notes
site plan review drawings (NOT FOR CONSTRUCTION)
sheet number 2 of 15

date
03 / 27 / 2020

STATE OF MICHIGAN
GRANT A. JEFFRIES
ARCHITECT
No. 130106294
LICENSED ARCHITECT

G/
0.02

1. The lot is 110' wide by 109' deep, which is 11,990 square feet (0.275 acres).

2. The existing building is 4,817 SF, and the existing roof directs stormwater towards downspouts attached to the sides of the building. These downspouts dump the water directly onto the building's parking lot and the adjacent parking lot to the west (Masonic Temple).

3. The existing parking lot is impervious asphalt paving, and covers approximately 5,375 SF. The paving is sloped to a storm drain in the middle of the parking lot, which directs the stormwater from both the roof and parking lot into the city's stormwater infrastructure.

4. Therefore, of the 11,990 SF lot, 10,192 SF (85%) is covered with impervious surfaces that direct water into the city's stormwater infrastructure.

5. Refer to the green infrastructure notes on the next sheet (C/1.20) for the proposed stormwater management strategies that will be employed for the new development.

general notes / existing stormwater management 12

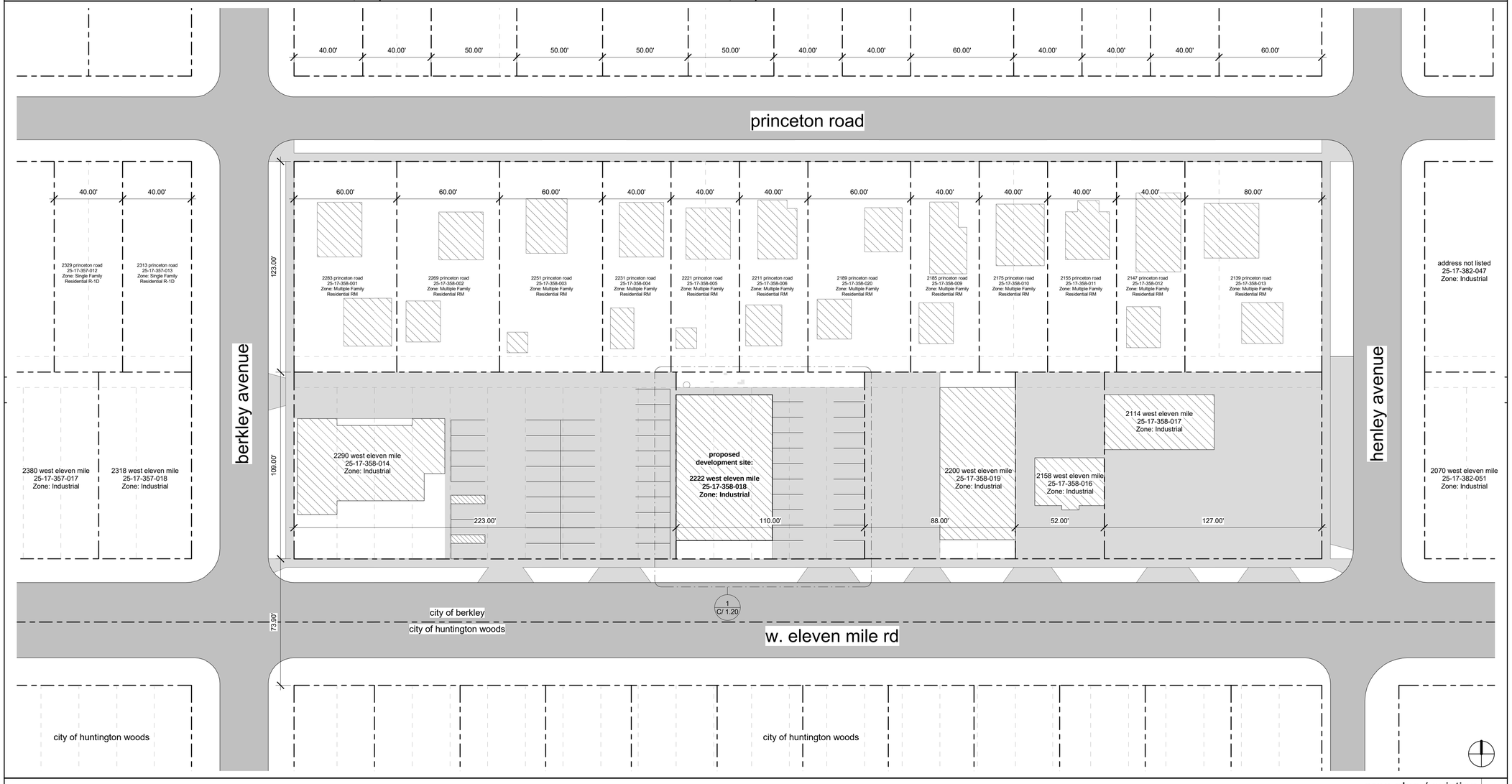
1. Refer to sheet C/1.20 for off-street parking requirements. 11 spaces are required per the ordinance and 13 are provided. Parking calculations and layout are provided on the aforementioned sheet.

2. In addition to the off-street parking spaces provided on the property, the applicant has two shared parking agreements for employee parking. Refer to the application documents for details of these agreements.

3. One of the above mentioned agreements is with the owners of the adjacent property to the west - 2290 West Eleven Mile Rd (Masonic Temple). The applicant will have use of the 10 easternmost spaces (directly to the west of the proposed development) until 6:00pm every day.

4. The other shared parking agreement is for the lot located at 1716 Coolidge Hwy (not pictured). The applicant has access to 10 spaces in this lot from 6:00pm to close.

general notes / shared parking agreements 9



area plan / existing 1" = 30'-0" 1

five / eighths

2321 Wolcott Street
Ferndale / Michigan / 48220

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e: info@5-8ths.com
www.5-8ths.com

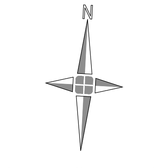
operation grow, LLC - d.b.a.
butter provisioning center
2222 w eleven mile road / berkley / mi / 48072

area plan / existing
site plan review drawings (NOT FOR CONSTRUCTION)
sheet number 3 of 15

date
01 / 21 / 2022

STATE OF MICHIGAN
GRANT A. JEFFRIES
ARCHITECT
No. 1301062494
LICENSED ARCHITECT

C/
1.10



NOTES:

- GAS UTILITY MAPS WERE NOT AVAILABLE AT TIME OF SURVEY.
- NO TITLE COMMITMENT POLICY WAS PROVIDED, THEREFORE EASEMENTS MAY EXIST THAT ARE NOT SHOWN.
- NO TITLE COMMITMENT POLICY WAS PROVIDED, THEREFORE EASEMENTS MAY EXIST THAT ARE NOT SHOWN.
- NO CERTIFICATION CAN BE MADE AS TO LIMITS OF OWNERSHIP.

BENCH MARK DATA

(N.A.V.D.88) DATUM

SITE BENCH MARK NO. 1

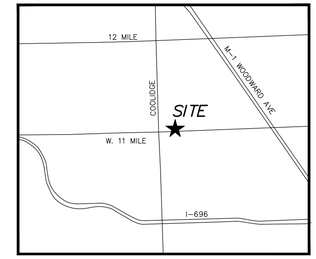
ARROW ON HYDRANT ON THE NORTH SIDE OF W. 11 MILE ROAD, +/– 55 FEET EAST OF THE SOUTHEAST CORNER OF BUILDING AT ADDRESS NO. 2222. (HYDRANT STAMPED WITH YEAR 2007)

ELEVATION: 674.39'

SITE BENCH MARK NO. 2

ARROW ON HYDRANT ON THE SIDE SOUTH OF W. 11 MILE ROAD, AT HOUSE NO. 13139 (HYDRANT STAMPED WITH YEAR 2008)

ELEVATION: 674.47'

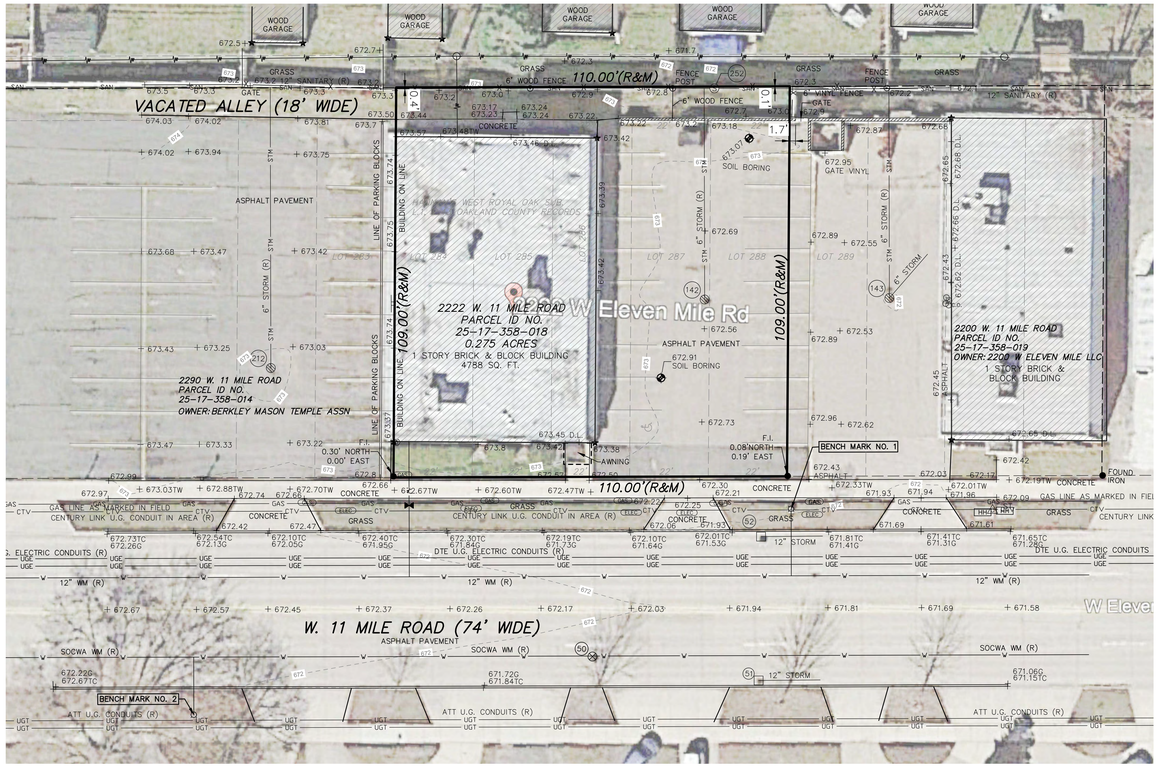


LOCATION MAP
(NOT TO SCALE)

PROPERTY DESCRIPTION

(OKLAND COUNTY RECORDS)

CITY OF BERKLEY, OAKLAND COUNTY, MICHIGAN
T1N, R11E, SEC 17 & 20
LOTS 284 TO 288 INCLUSIVE, ALSO 1/2 OF VACATED ALLEY ADJACENT OF.
HANNAN'S WEST ROYAL OAK SUBDIVISION, L.1, P.43



SCHEDULE OF STRUCTURES

STRUCTURE	TYPE	SIZE OF PIPE	RIM	DROP	INVERT	DIRECTION	COMMENTS
50	GATE VALVE		671.75	-3.52	668.23		MEASURED TO TOP OF VALVE, FULL OF WATER, NO PIPES VISIBLE
51	CATCH BASIN	12"	671.33	-3.51	667.82	EAST	
52	CATCH BASIN	12"	671.42	-4.22	667.20	EAST	
142	ROUND CATCH BASIN		672.35	-3.00	669.35		MEASURED TO TOP OF DEBRIS, FULL OF DEBRIS
			672.35	-1.22	671.13		MEASURED TO TOP OF PIPE
143	ROUND CATCH BASIN	6"	671.94	-3.81	668.13	NORTHEAST	
			671.94	-3.95	667.99		MEASURED TO BOTTOM OF STRUCTURE
212	ROUND CATCH BASIN	6"	672.84	-2.55	670.29	NORTH	
252	SANITARY MANHOLE		672.40				UNABLE TO OPEN LID, MANHOLE IS UNDER A FENCE LINE

UTILITY STATEMENT

THE UNDERGROUND UTILITIES SHOWN HAVE BEEN LOCATED FROM FIELD SURVEY INFORMATION AND EXISTING DRAWINGS. THE SURVEYOR MAKES NO GUARANTEES THAT THE UNDERGROUND UTILITIES SHOWN COMPRISE ALL SUCH UTILITIES IN THE AREA, EITHER IN SERVICE OR ABANDONED. THE SURVEYOR FURTHER DOES NOT WARRANT THAT THE UNDERGROUND UTILITIES SHOWN ARE IN THE EXACT LOCATION INDICATED ALTHOUGH HE DOES CERTIFY THAT THEY ARE LOCATED AS ACCURATELY AS POSSIBLE FROM INFORMATION AVAILABLE.

(R) = UTILITY SHOWN FROM RECORDS OR PLANS, & FIELD LOCATED WHERE POSSIBLE.

PRIOR TO THE PLANNED BUILDING IMPROVEMENTS, AND/ OR CONSTRUCTION, THE RESPECTIVE UTILITY COMPANIES MUST BE NOTIFIED TO STAKE THE PRECISE LOCATION OF THEIR UTILITIES.

LEGEND – EXISTING

- SECTION LINE
- E/ PAVEMENT
- CURB
- E/ GRAVEL
- CL ROAD
- E/ WALK
- RAILROAD
- E/ BRICK
- MISC. LINE
- FENCE
- GUARD RAIL
- WALL
- BLDG. LINE
- OVERHEAD WIRES
- RAILING
- OVERHANG LINE
- T/ BANK
- B/ BANK
- CL DITCH/STREAM
- SHRUB LINE
- TREE LINE
- WATER EDGE
- WETLAND LINE
- STORM LINE
- SAN. LINE
- WATER LINE
- GAS LINE
- UG ELEC. LINE
- UG TELE. LINE
- UG CABLE TV LINE
- PAINT STRIPE
- COMBINED SEWER
- PLD LINE
- STEAM LINE
- ELECTRIC OVERHEAD
- TELEPHONE OVERHEAD
- SAN. MH
- C.O. SAN. CLEAN OUT
- SAN. RISER
- SAN. PUMP STATION
- COMB. MH
- GATE VALVE
- HYDRANT
- WATER VALVE
- WATER METER
- POST INDICATOR VALVE
- WELL HEAD
- FDC CONNECTION
- IRRIGATION CONTROL BOX
- STORM MH
- CATCH BASIN
- BEEHIVE CB
- CULVERT E.S.
- ROOF/DOWN SPOUT
- OVERFLOW/OUTLET STRUCTURE
- C.O. STORM CLEAN OUT
- ROUND CB
- LIGHT POLE
- UTILITY POLE
- ELEC. TRANS.
- AIR CONDITIONER
- ELEC. MH
- ELEC. METER
- ELEC. RISER
- TRAFFIC CONTROL BOX
- STEAM MH
- PUBLIC LIGHTING MH
- GAS METER
- GAS RISER
- GAS VALVE
- GAS MH
- TELE. RISER
- TELE. MH
- TELE. CROSS BOX
- CABLE RISER
- PAY PHONE
- MANHOLE
- SIGN
- PROT. POST/GUARD POST
- GUY
- DECIDUOUS TREE
- CONIFEROUS TREE
- DEAD TREE
- UTILITY FLAG
- BLDG. CORNER (FIELD LOCATED)
- HANDICAP PARKING
- WETLAND FLAG
- BUSH/SHRUB
- PARKING METER
- RESIDENTIAL MAILBOX
- U.S. MAILBOX
- 000.00+ EXISTING ELEVATION
- SOIL BORING
- MONITORING WELL
- LAWN IRRIG. HEAD
- CENTERLINE R.R. TRACK
- MISC. TOPO. SHOT
- SURVEY CONTROL POINT
- FOUND IRON
- FOUND NAIL
- F. CUT CROSS
- SECTION COR.
- FENCE POST
- BENCHMARK
- FOUND PIPE
- FOUND MON.
- ASPH. ASPHALT
- CONC. CONCRETE
- A.C. AIR CONDITIONER
- G.P. GUARD POST
- C.L.F. CHAIN–LINK FENCE
- D.L. DOOR LEDGE
- F.F. FINISHED FLOOR
- O.H. OVERHANG
- F.I. FOUND IRON
- S.I. SET IRON
- F.I.P. FOUND IRON PIPE
- M. MEASURED
- R. RECORD
- F.M. FOUND MONUMENT
- S.N. SET NAIL
- CMP CORREGATED METAL PIPE
- RCP REINFORCED CONCRETE PIPE
- G.L. GROUND LIGHT

giffels webster
Engineers
Surveyors
Planners
Landscape Architects

28 West Adams Road
Suite 1200
Detroit, MI 48226
p (313) 962-4442
f (313) 962-5068
www.giffelswebster.com

Executive:	C.A.A.
Manager:	C.A.A.
Designer:	J.A.B.
Quality Control:	C.A.A.
Section:	17 &20
	T-01-N R-11-E

Professional Seal:

Know what's below. Call before you dig.

DATE:	ISSUE:
01.21.22	Submit to City

TOPOGRAPHIC SURVEY

C\ 1.11

2222 W. 11 MILE ROAD

CITY OF BERKLEY
OAKLAND COUNTY
MICHIGAN

Date:	11.20.20
Scale:	1"=20'
Sheet:	4 OF 15
Project:	19823.10

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H:\19\19800\19823.00 Berkley Dispensary\Design\CAD\Original Berkley Butter Topo Survey.dwg

Per Section 138-526 - Schedule of Regulations of the Berkley Zoning Ordinance:

maximum building height: 40'

maximum lot coverage: no maximum

setbacks:

front (south):	10'
side (east):	none required for interior lots
side (west):	none required for interior lots
rear (north):	10'

Proposed Development:

Height of building: 15'-4" **[COMPLIES]**

Front Setback:	10'-7" **[COMPLIES]**
Side Setback (East):	53'-0" **[COMPLIES]**
Side Setback (West):	None **[COMPLIES]**
Rear Setback:	12'-9" **[COMPLIES]**

general notes / schedule of regulations 9

Per Section 138-219 - Off-Street Parking Requirements of the Berkley Zoning Ordinance:

Retail store (suite A):

One per 225 square feet of usable floor area

Wholesale and warehouse establishments (suite B):

One per 250 square feet of usable floor area

Proposed Renovation to 2222 West Eleven Mile Road:

Total area of building (square feet):

3,311 gross x (0.7) =	2,318 usable floor area
922 gross x (0.7) =	645 usable floor area
2,318 / 225 =	10.3
645 / 250 =	2.6

SUBTOTAL

10.3 + 2.6 = 12.9 **(Round up to 13)**

Per Section 138-220(b) - Parking Dimsensions of the Berkley Zoning Ordinance, no more than 30 percent of the required parking spaces may be 8' x 16' for compact car spaces.

(0.3) x (13) = 3.9

Therefore, no more than 3 of the 13 spaces may be compact spaces.

Per Section 138-221 of the Berkley Zoning Ordinance, 1 barrier free parking space is required for parking lots with up to 25 spaces.

Therefore, 1 barrier free space is required.

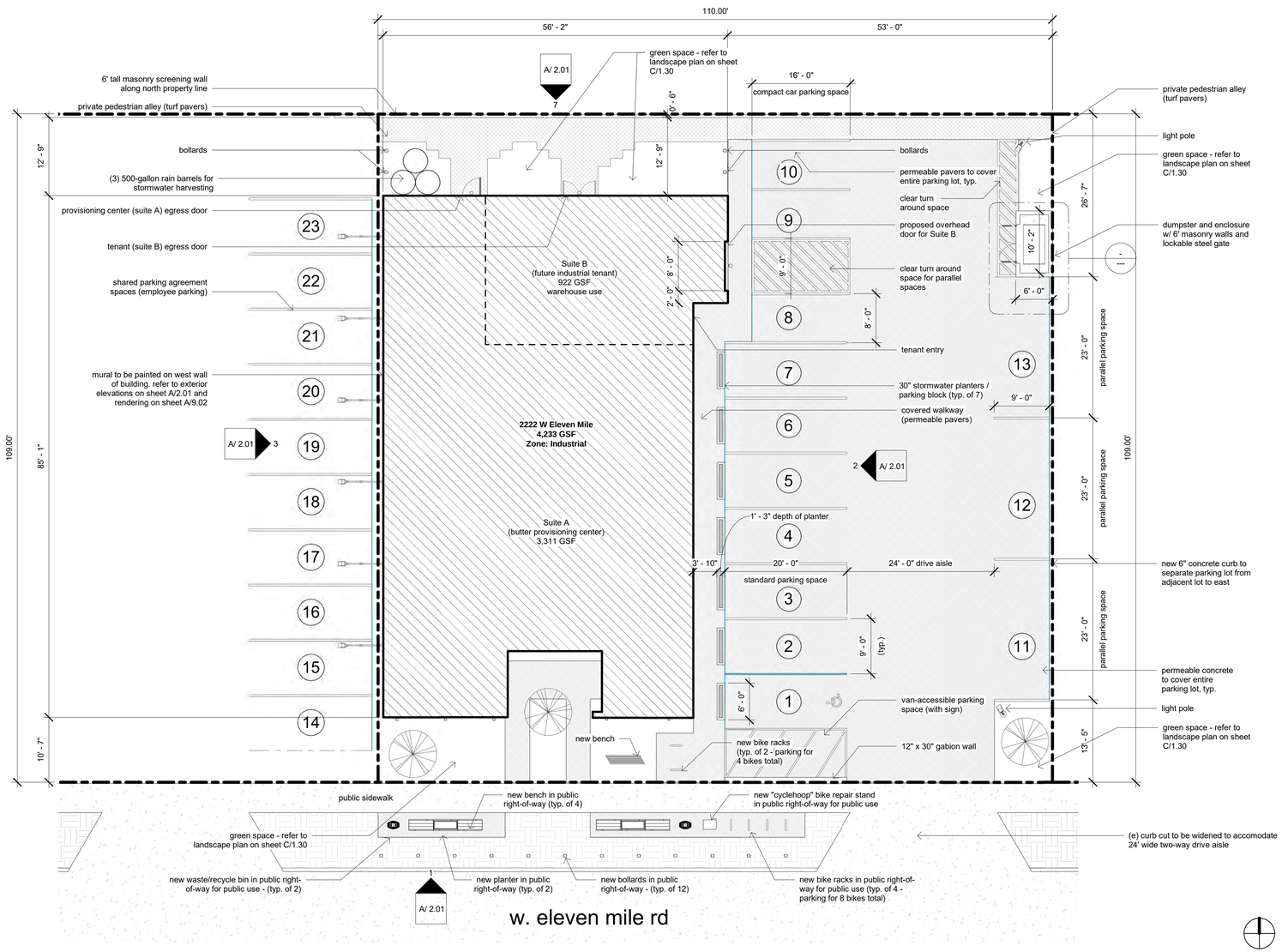
Per Section138-268. - Parking Credit of the Berkley Zoning Ordinance, "bicycle parking may be used to reduce the number of required off-street parking spaces. Existing developments may elect to reduce the required off-street parking by two car parking spaces by providing four bicycle parking spaces"

Parking for 4 bikes is provided, therefore the required number of parking spaces is reduced to 11, but 13 spaces are provided.

Proposed parking spaces on site:

9 standard spaces, 3 compact spaces, 1 barrier-free van accessible space for a total of 13 spaces **[COMPLIES]**

general notes / off-street parking requirements 3



site plan / proposed 1 1" = 10'-0"

five / eighths
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butter provisioning center
2222 w eleven mile road / berkley / mi / 48072

site plan / proposed
site plan review drawings (NOT FOR CONSTRUCTION)
sheet number 5 of 15

date
01 / 21 / 2022

STATE OF MICHIGAN
GRANT A. JEFFRIES
ARCHITECT
No. 1301062494
LICENSED ARCHITECT

C/
1.20

SITE CIVIL NOTES OF INTENT

- GRADING AND SESC: ALL GRADING AND SOIL EROSION & SEDIMENTATION CONTROL MEASURES WILL BE IMPLEMENTED AND STRICTLY ENFORCED THROUGHOUT CONSTRUCTION.
- SANITARY SERVICE: THE EXISTING SANITARY SERVICE IS PROPOSED TO BE UTILIZED. THE EXISTING SANITARY LEAD WILL BE TELEVISED TO ENSURE SERVICEABILITY.
- WATER SERVICE: THE EXISTING WATER SERVICE IS PROPOSED TO BE UTILIZED. BUILDING WILL NOT BE FIRE SUPPRESSED AND NO NEW WATER SERVICES ARE ANTICIPATED.
- STORMWATER MANAGEMENT: A GREEN ROOF, POROUS INTERLOCKING CONCRETE PAVERS (PICP), AND PERVIOUS CONCRETE PAVEMENT ARE PROPOSED TO REDUCE THE OVERALL STORMWATER RUNOFF FOR THE SITE.
  - THE EXISTING CATCH BASIN IN THE PARKING LOT WILL BE REMOVED AND DISCONNECTED FROM THE COMBINED SEWER IN THE REAR OF THE LOT.
  - A TOTAL OF 31" THICK PERVIOUS CONCRETE PAVEMENT SECTION, PER GEOTECHNICAL REPORT, WILL PROVIDE STORAGE AND TRANSMISSION OF STORM RUNOFF.
  - THE BOTTOM 8" STONE LAYER BASE (MDOT 6A), ASSUMING THE STANDARD 40% VOID SPACE, CAN HOLD 1,400cf OF STORMWATER, 1010cf ARE REQUIRED. (SEE CALCULATIONS)
  - THE SUBBASE OF THE PARKING AREAS WILL BE GRADED SUCH THAT IT WILL ALLOW THE PERFORATED PIPES TO BE PLACED WITH A 0.5% SLOPE TOWARD THE RESTRICTED MANHOLE.
  - THE PROPOSED STORM MANHOLE NEAR THE DRIVE ENTRANCE WILL BE RESTRICTED TO ONLY ALLOW 0.06cfs OUTFLOW PER OAKLAND COUNTY STANDARDS. (SEE CALCULATIONS).

Weighted "C" Calculation

	Area (acres)	C	Area x C
Building Green Roof	0.10	0.50	0.0500
Pervious Concrete Pavement	0.12	0.20	0.0240
Porous Pavers	0.03	0.35	0.0105
Landscape Areas	0.03	0.30	0.0090
Total	0.28	AREA	0.0935
C=	Area x C / Area	=	0.09 / 0.28 = 0.33

Allowable Outflow Calculations

Based on Acreage: Property Area= 0.28 acres

Q_o= 0.20 cfs/acre

= 0.20 cfs/acre x 0.28 acres

= 0.06 cfs

RESTRICT 6" OUTLET PIPE WITH 1.5" DIAMETER OPENING.

50 YEAR STORM EVENT
Required Storage Volume

Q_{50}= Q_o = 0.06 x A x C = 0.28 acres x 0.33

= 0.598930481 cfs per acres impervious

T_{100}= -25 + $\sqrt{10.313 \times Q_{50}}$

= -25 + $\sqrt{10.313 \times 0.60}$

= 106.2181084 minutes

V_{100}= 16,500 x T_{100} / (T_{100} + 25) - 40 x Q_{50} x T_{100}

= 16,500 x 106.2181084 / (106.2181084 + 25) - 40 x 0.60 x 106.22

= 10811.6885 cubic feet per acre impervious

V_{100}= V_{100} x A x C

= 10811.6885 x 0.28 x 0.33

= 1010.892875 cubic feet

PROPERTY DESCRIPTION

(OKLAND COUNTY RECORDS)

CITY OF BERKLEY, OAKLAND COUNTY, MICHIGAN
T1N, R11E, SEC 17 & 20
LOTS 284 TO 288 INCLUSIVE, ALSO 1/2 OF VACATED ALLEY ADJACENT OF.
HANNAN'S WEST ROYAL OAK SUBDIVISION, L.1, P.43

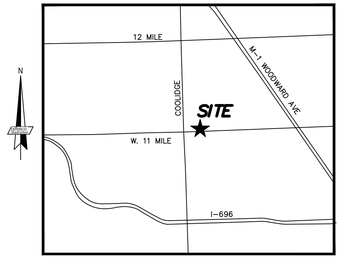
SEE INCLUDED TOPOGRAPHIC AND BOUNDARY SURVEY

BENCH MARK DATA

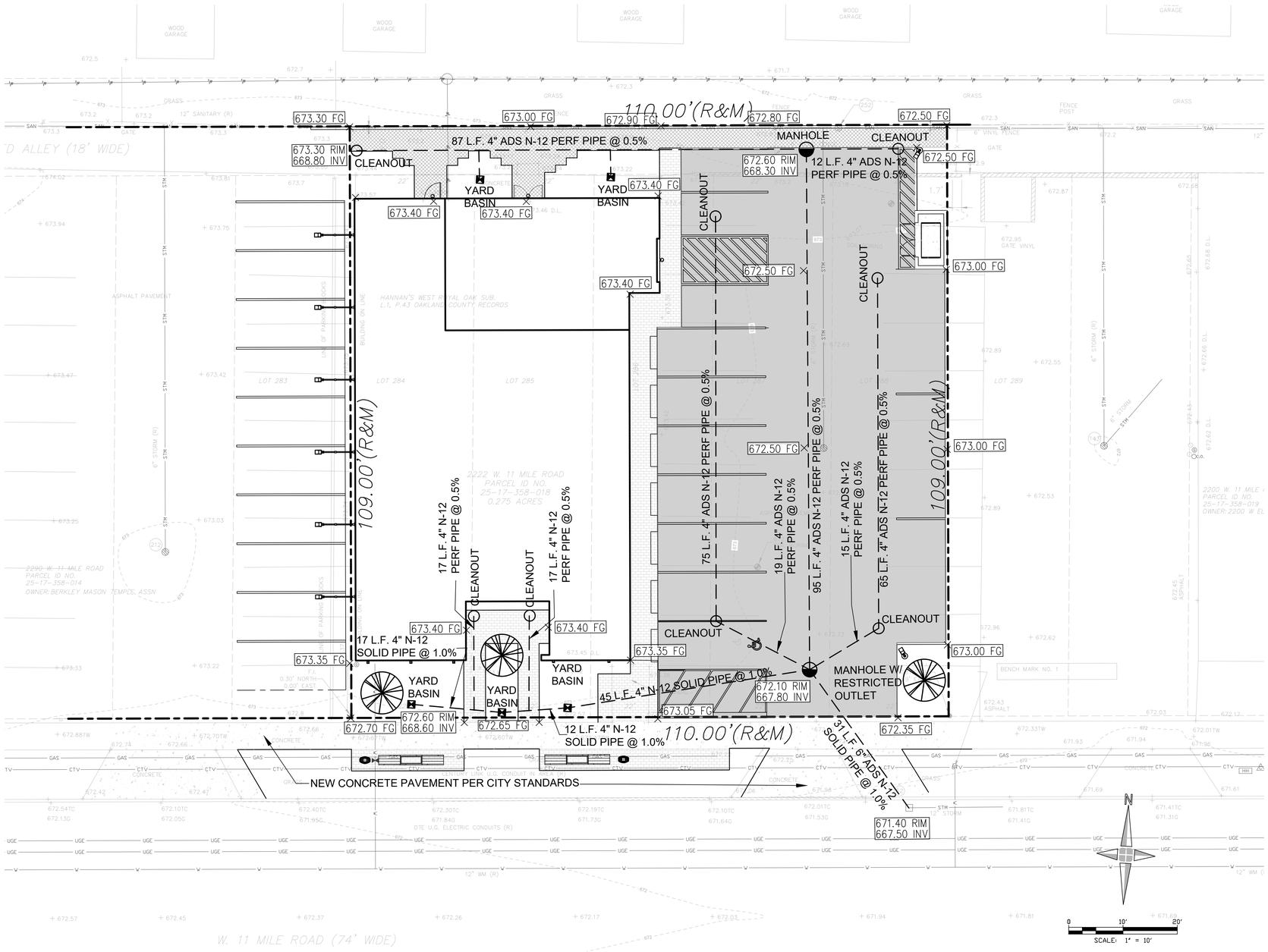
(N.A.V.D.88) DATUM

SITE BENCH MARK NO. 1
ARROW ON HYDRANT ON THE NORTH SIDE OF W. 11 MILE ROAD,
+/- 55 FEET EAST OF THE SOUTHEAST CORNER OF BUILDING AT ADDRESS NO. 2222.
(HYDRANT STAMPED WITH YEAR 2007)
ELEVATION: 674.39'

SITE BENCH MARK NO. 2
ARROW ON HYDRANT ON THE SIDE SOUTH OF W. 11 MILE ROAD, AT HOUSE NO. 13139
(HYDRANT STAMPED WITH YEAR 2008)
ELEVATION: 674.47'



LOCATION MAP
(NOT TO SCALE)



giffels webster

Engineers
Surveyors
Planners
Landscape Architects

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Detroit, MI 48226
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Executive:	MP
Manager:	JKA
Designer:	JKA
Quality Control:	MP
Section:	17 &20
	T-01-N R-11-E

Professional Seal:

STATE OF MICHIGAN — JOSEPH K. ANDERSON — ENGINEER — No. 55582 — PROFESSIONAL ENGINEER

Know what's below. Call before you dig.

DATE:	ISSUE:
01.22.2022	Submit to City

Developed For:

Operation Grow LLC
d.b.a.
Butter Provisioning Center
3249 Wakefield Rd.
Berkley, MI 48072
517-881-2216
danny@operationgrow.biz

ENGINEERING SITE PLAN

C\ 1.21

2222 W. 11 MILE ROAD

CITY OF BERKLEY
OAKLAND COUNTY
MICHIGAN

Date:	04.20.2021
Scale:	1"=10'
Sheet:	6 OF 15
Project:	19823.10

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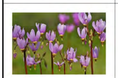
H:\19\19800\19823.00 Berkely Dispensary\Design\CAD\Engineering Site Plan Berkley.dwg

1. Refer to the roof plan on sheet A/1.40 for information and a cross section of the green roof.

2. Refer to the exterior renderings on sheet A/9.01 and A/9.02 for photorealistc depictions of the landscaped green spaces.

general notes / landscape plan 12

image	symbol	species / cultivar / type	size / spacing
		multi-stem eastern redbud *Cercis canadensis* native deciduous tree	6' - 8' location per plan
		prairie dropseed *Sporobolus heterolepis* native prairie grass	2 gallon 18" - 24" o.c.
		pennsylvania sedge *Carex pensylvanica* native flowering plant	1 quart 12" o.c.
		'unmowed' creeping red fescue *Festuca rubra* native bunchgrass	seeded
		northern oak fern *Gymnocarpium dryopteris* native deciduous fern	1 gallon 12" - 18" o.c.
		marsh blazing star *Liatris spicata* native flowering plant	1 gallon 18" - 24" o.c.
		wild begamont 'bee balm' *Monarda fitulosa* native wildflower	1 gallon 18" - 24" o.c.
		yellow coneflower *Ratibida pinnata* native flowering plant	1 gallon 12" - 18" o.c.
		short's aster *Symphyotrichum shortii* native flowering plant	1 gallon 12" o.c.
		wood geranium *Geranium maculatum* native perennial plant	1 gallon 12" o.c.
		shooting star *Dodecatheon meadia* native flowering plant	1 gallon 12" - 18" o.c.
		prairie phlox *Phlox pilosa* native herbaceous plant	1 quart 12" o.c.
		locally sourced landscape boulder	2' - 4'

schedule / landscape 10

turf stones walkway to be planted with creeping red fescue that is mowed with regular landscape maintenance

rain barrels

alley green space

northeast green space

Narrative of general landscape strategy:

Landscaped elements are prominent throughout the property, comprised entirely of species native to Southeast Michigan. The all-native landscape was selected to promote local ecology and provide a nearly maintenance-free environment, while promoting sustainability. The prairie dropseed grass that makes up the bulk of the plantings has a deep, broad root system that is very drought tolerant. The plant selections are minimal, yet diverse, creating an ideal habitat for insects and small wildlife to thrive. Once the gardens reach maturity (approximately 2 years), the need to mulch the beds will be eliminated. Furthermore, the need to use pesticides, herbicides, fungicides, and fertilizers can be removed from the maintenance package, which will result in cleaner stormwater runoff. Due to the lack of maintenance, air pollution will also be reduced. The species to the north of the building were selected to be shade tolerant.

southeast green space

bench

entry courtyard green space

4 C/ 7.01

9 C/ 7.01

6 C/ 7.01

site plan / landscape 3/16" = 1'-0" 1

five / eighths

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site plan / landscape
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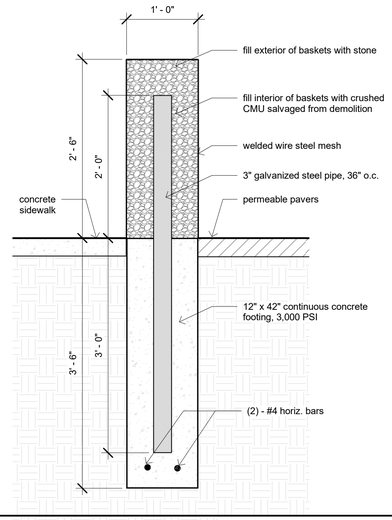
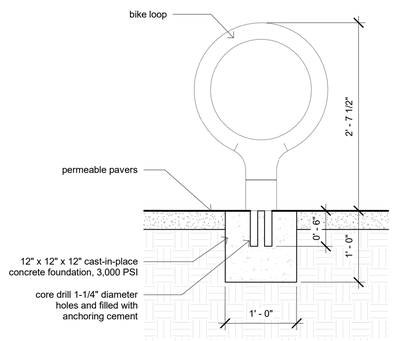
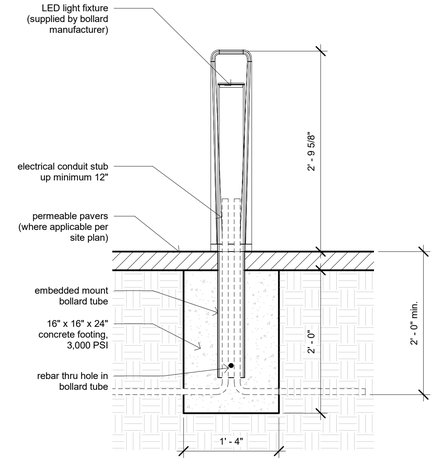
C/ 1.30



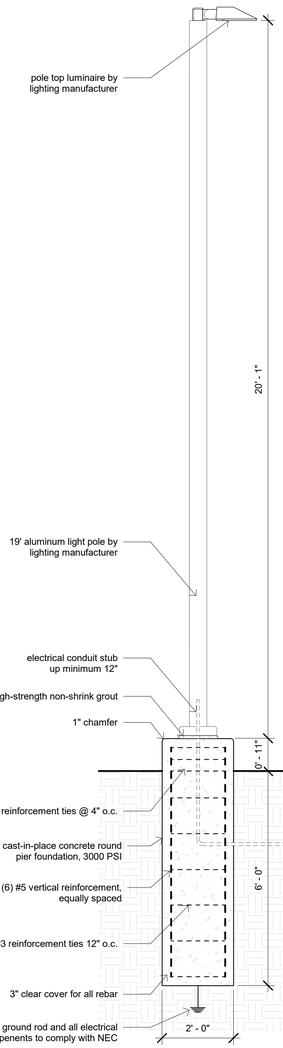
section detail / gabion wall 9
1" = 1'-0"



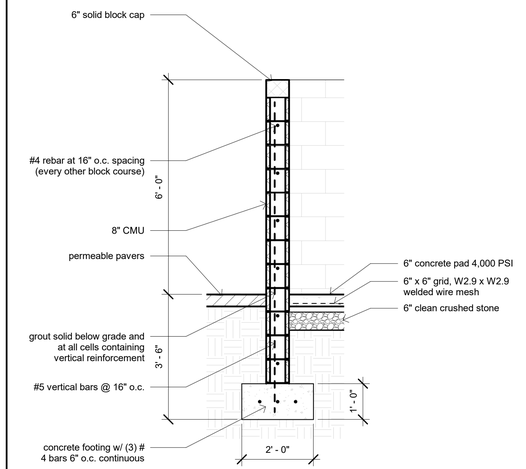
detail / bike loop 6
1" = 1'-0"



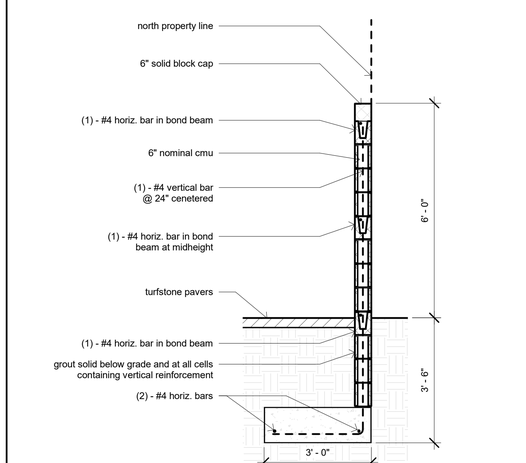
section detail / typical bollard 3
1" = 1'-0"



detail / light pole 4
1/2" = 1'-0"



section detail / dumpster enclosure 2
1/2" = 1'-0"



section detail / 6' masonry screen wall 1
1/2" = 1'-0"

five / eighths
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details / site
site plan review drawings (NOT FOR CONSTRUCTION)
sheet number 8 of 15

date
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STATE OF MICHIGAN
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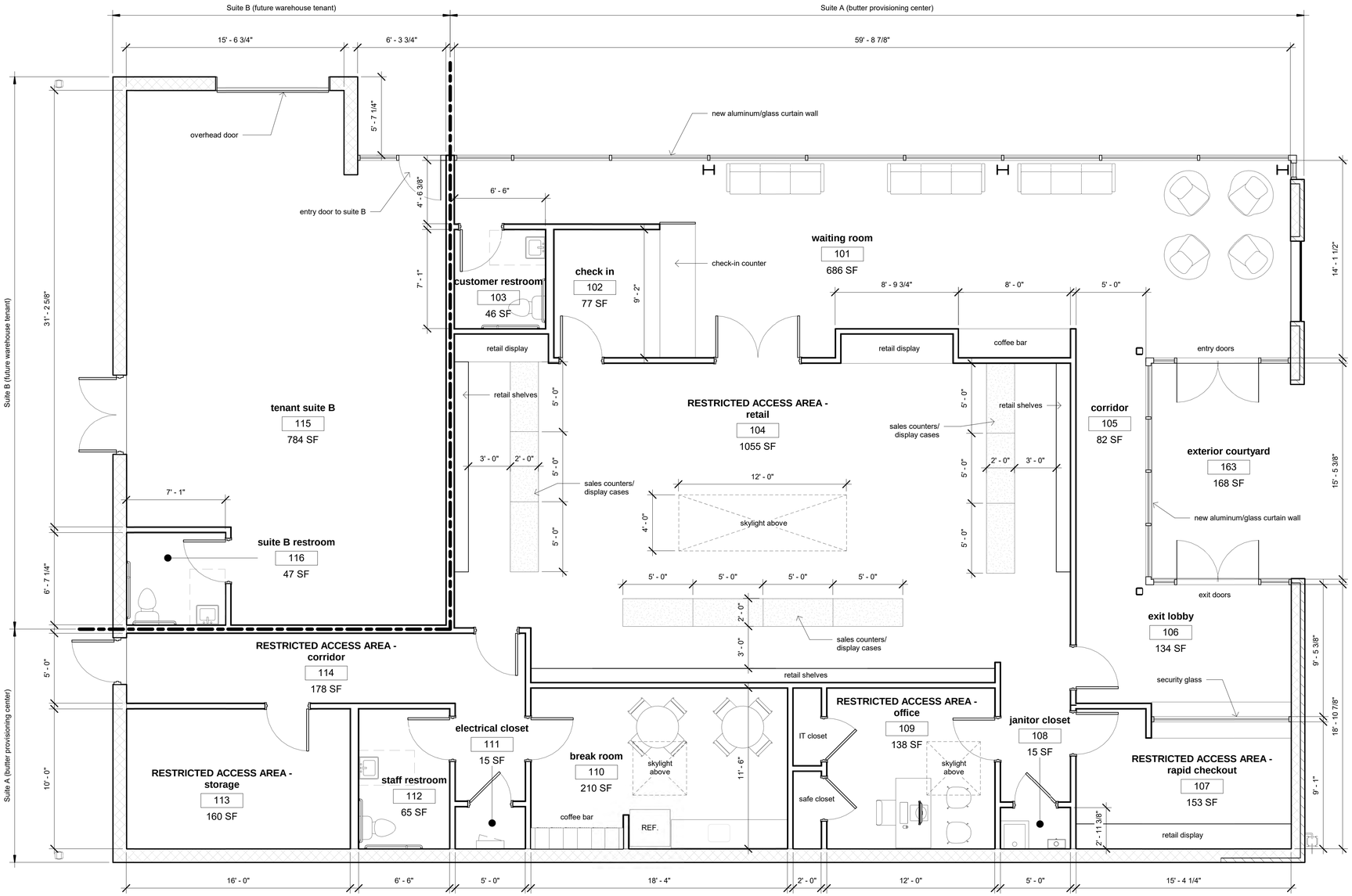
C/
7.01



floor plan / proposed
1/4" = 1'-0"

1

five / eighths

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floor plan / proposed
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sheet number 9 of 15

date
01 / 21 / 2022

STATE OF MICHIGAN
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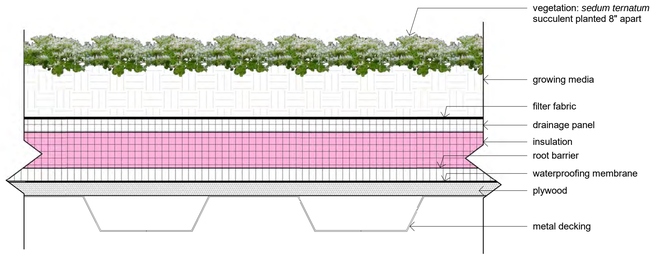
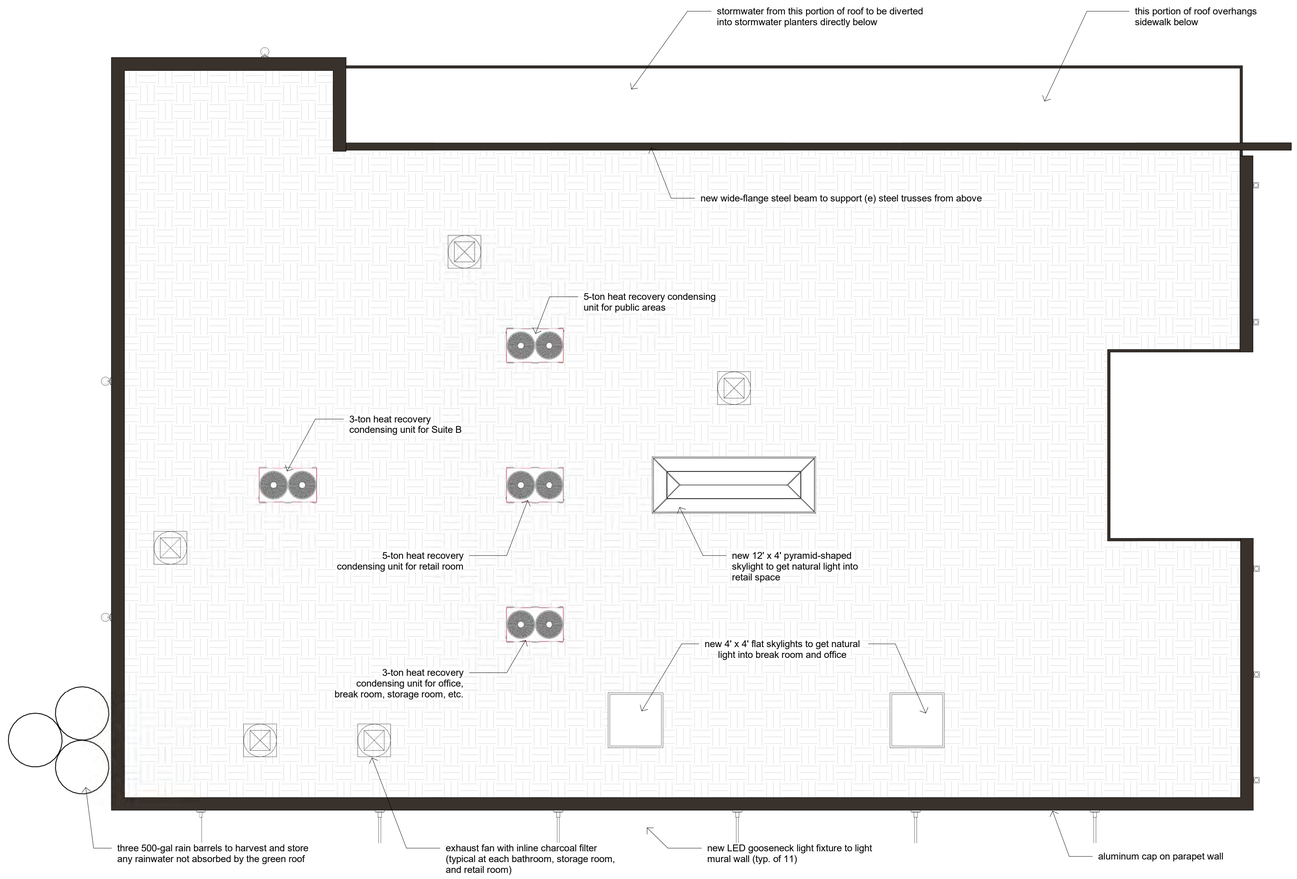
A/
1.01



detail / green roof
3" = 1'-0" | 6

1. Outdoor HVAC units will be placed at least 10' from edge of roof so that guard rails won't be required. Units will be screened as required so they are not visible from ground.

general notes / roof plan | 3



roof plan
3/16" = 1'-0" | 1

five / eighths

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roof plan
site plan review drawings (NOT FOR CONSTRUCTION)
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date
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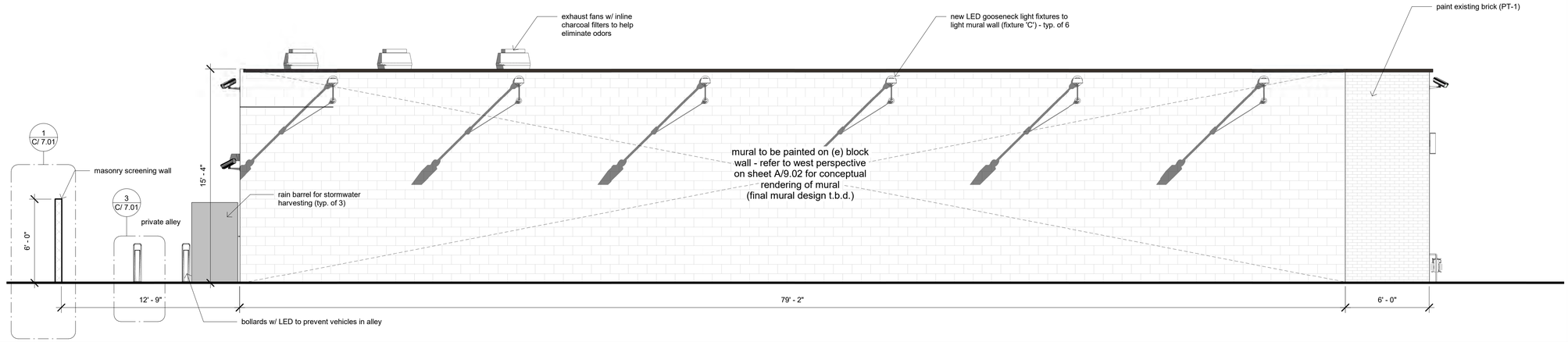
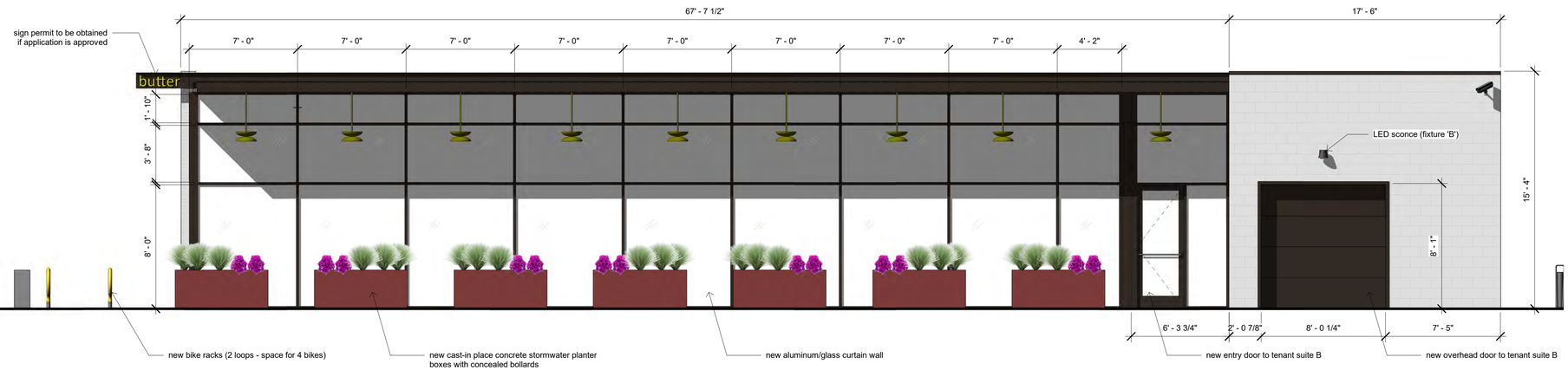
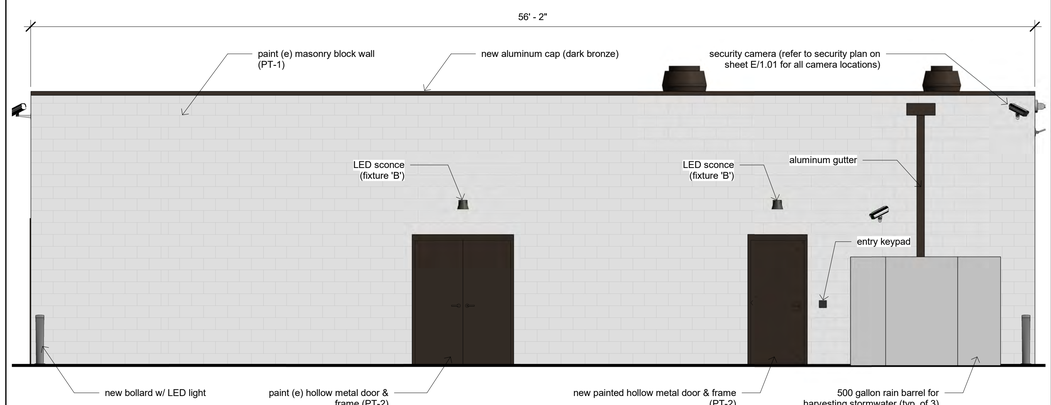
A/
1.40



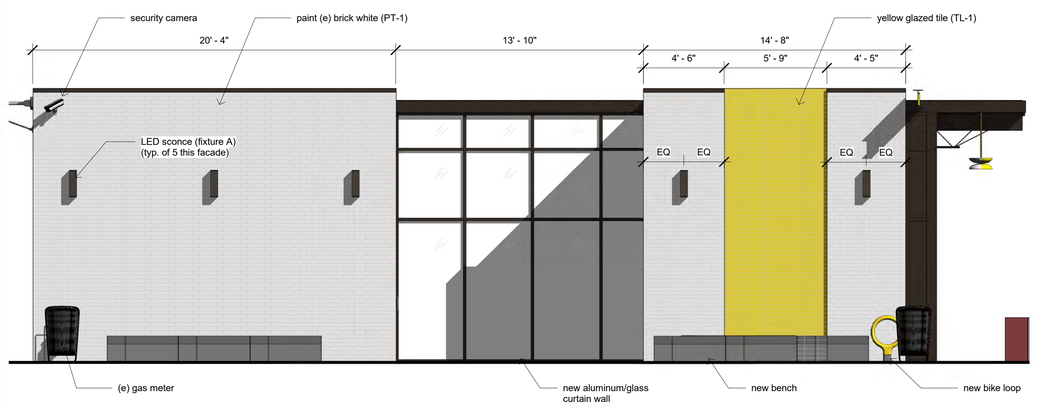
exterior elevation / west (mural wall) 3
1/4" = 1'-0"



exterior elevation / east (parking lot) 2
1/4" = 1'-0"



exterior elevation / north (private alley) 7
1/4" = 1'-0"



exterior elevation / south (11 mile) 1
1/4" = 1'-0"

five / eighths

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elevations / exterior
site plan review drawings (NOT FOR CONSTRUCTION)
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A/
2.01



existing building photo / south | 8



NOTE: Refer to key note legends on sheet A/9.02 for designations of streetscape addition tags (A., B. C., etc.) and physical improvements tags (1., 2., 3., etc).

exterior perspective / south | 2



existing building photo / east | 7



NOTE: Refer to key note legends on sheet A/9.02 for designations of streetscape addition tags (A., B. C., etc.) and physical improvements tags (1., 2., 3., etc).

exterior perspective / east | 1

five / eighths

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exterior renderings
site plan review drawings (NOT FOR CONSTRUCTION)
sheet number 12 of 15

date
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A/
9.01

Refer to the following tags in the renderings to see depictions of the proposed streetscape additions. They are also labeled on the proposed site plan on sheet C/1.20:

A. New bike loops (not all bike loops are visible in rendering. Refer to site plan for locations of all proposed loops)

B. New public bike repair stand

C. New bench

D. New planter box

E. New waste/recycle bins (not visible in renderings - refer to site plan on sheet C/1.20 for locations)

F. New bollards with LED lighting

key notes / streetscape elements 5

Refer to the following tags in the renderings to see depictions of the proposed physical improvements to the property and contiguous areas as part of the new development. They are also labeled on the propsed site plan on sheet C/1.20 and the landscape plan on sheet C/1.30:

1. New non-invasive tree

2. Public Art

3. Green Space

4. Permeable pavers (parking lot and sidewalks)

5. Turf pavers (public alleyway)

6. Courtyard

7. New dumpster/recycling bin enclosure

key notes / physical improvements 2



existing building photo / north (alley) 10



NOTE: Refer to key note legends on this sheet for designations of streetscape addition tags (A., B. C., etc.) and physical improvements tags (1., 2., 3., etc).

NOTE: Mural depicted for conceptual purposes only. Final mural design to be determined and approved by appropraite channels

exterior perspective / west 1

five / eighths

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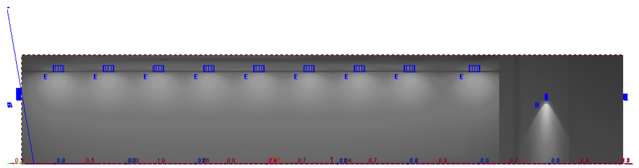
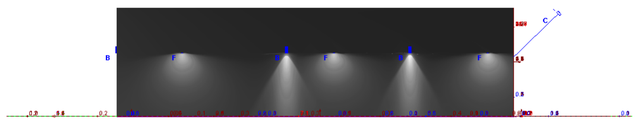
A/
9.02



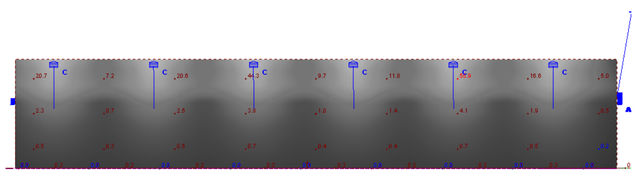
SOUTH



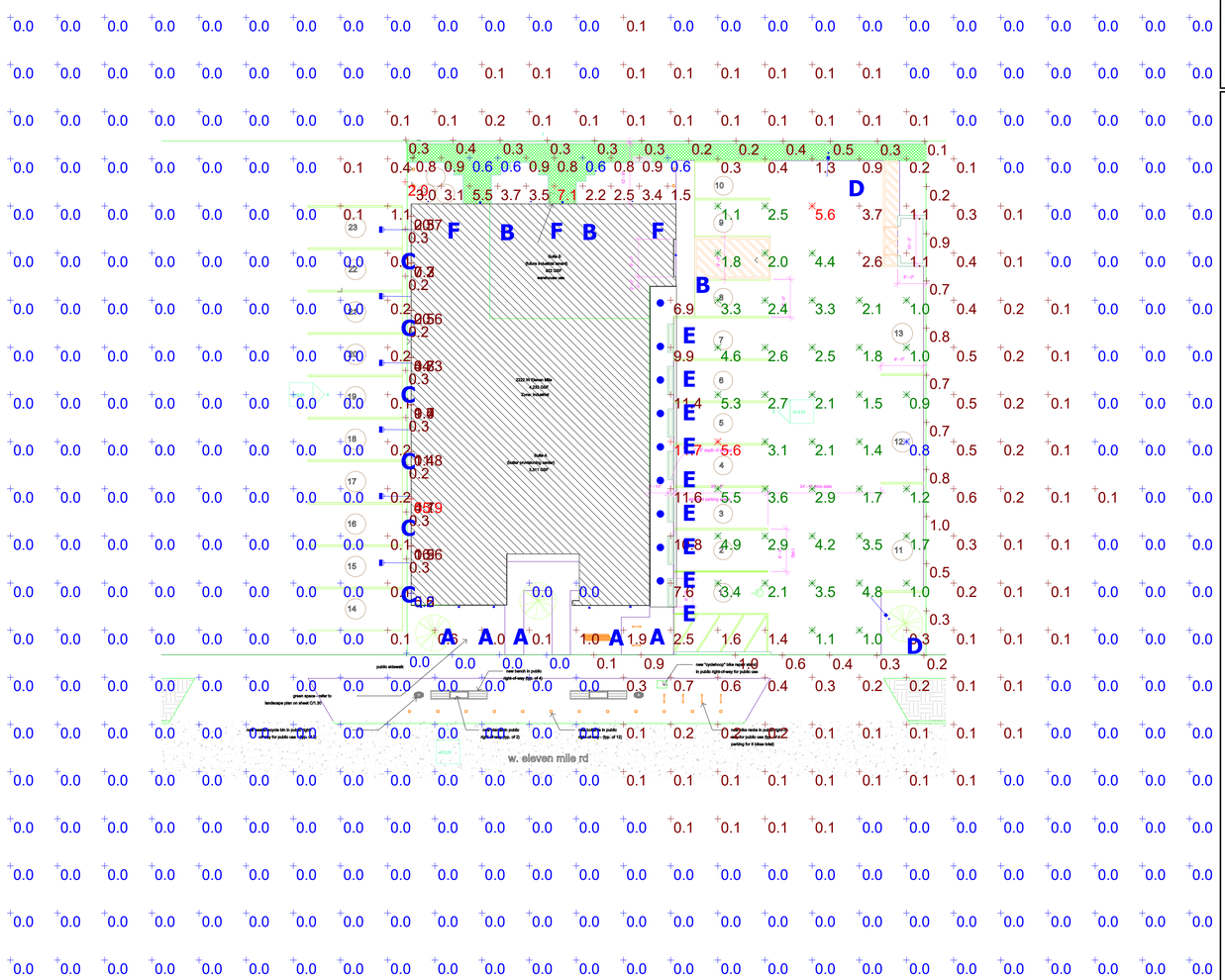
EAST



NORTH



WEST



Plan View
Scale - 1" = 15ft

Schedule

Symbol	Label	QTY	Manufacturer	Description	Lamp	Lumens per Lamp	Catalog Number	LLF	Wattage	MOUNTING HEIGHT
	A	5	BEGA	24 008 K3 TWO SIDED LIGHT OUTPUT EXTERIOR WALL SCONCE	LED 24,2W	2215	24 008 K3	0.9	30	9'
	B	3	BEGA	24 034 K3 ONE SIDED LIGHT OUTPUT EXTERIOR WALL SCONCE	LED 12,1W	1106	24 034 K3	0.9	15	9'
	C	6	BEGA	24 509 K3 ADJUSTABLE WALL GANTRY	LED 55,3W	6672	24 509 K3	0.5	61	14.5' HIGH, 6' FROM WALL
	D	2	BEGA Converted by LUMCat V 30.11.2016 / H.R.	84 407 K3	LED 55,3W	6671		0.9	61	20'
	E	9	Visual Comfort Group/TECH	Outdoor Pendant	LED	2462	700OPROT9xx 18BUNV	0.9	36.1	BOTTOM OF FIXTURE AT 13' (ORDER 12' STEM)
	F	3	Lithonia Lighting	LIL Wallpack (Standard)	LED	833	LIL LED 40K MVOLT DDBTXD	0.9	8.36	9'

Statistics

Description	Symbol	Avg	Max	Min	Max / Min	Avg / Min	Avg / Max
ALLEYWAY N	+	2.2 fc	7.1 fc	0.6 fc	11.8:1	3.7:1	0.3:1
PARKING AND DRIVES	X	2.7 fc	5.6 fc	0.8 fc	7.0:1	3.4:1	0.5:1
PL	+	0.4 fc	2.0 fc	0.0 fc	N/A	N/A	0.2:1
SITE	+	0.5 fc	11.7 fc	0.0 fc	N/A	N/A	0.0:1
WEST FACADE	+	7.9 fc	55.9 fc	0.2 fc	279.5:1	39.5:1	0.1:1

General Note

1. SEE SCHEDULE FOR LUMINAIRE MOUNTING HEIGHT. SEE SCHEDULE FOR ADDITIONAL NOTES.
2. CALCULATIONS ARE SHOWN IN FOOTCANDLES AT: 0' - 0"
3. LIGHTING ALTERNATES REQUIRE NEW PHOTOMETRIC CALCULATION AND RESUBMISSION TO CITY FOR APPROVAL.

THE ENGINEER AND/OR ARCHITECT MUST DETERMINE APPLICABILITY OF THE LAYOUT TO EXISTING / FUTURE FIELD CONDITIONS. THIS LIGHTING LAYOUT REPRESENTS ILLUMINATION LEVELS CALCULATED FROM LABORATORY DATA TAKEN UNDER CONTROLLED CONDITIONS IN ACCORDANCE WITH ILLUMINATING ENGINEERING SOCIETY APPROVED METHODS. ACTUAL PERFORMANCE OF ANY MANUFACTURER'S LUMINAIRE MAY VARY DUE TO VARIATION IN ELECTRICAL VOLTAGE, TOLERANCE IN LAMPS, AND OTHER VARIABLE FIELD CONDITIONS. MOUNTING HEIGHTS INDICATED ARE FROM GRADE AND/OR FLOOR UP.

THESE LIGHTING CALCULATIONS ARE NOT A SUBSTITUTE FOR INDEPENDENT ENGINEERING ANALYSIS OF LIGHTING SYSTEM SUITABILITY AND SAFETY. THE ENGINEER AND/OR ARCHITECT IS RESPONSIBLE TO REVIEW FOR MICHIGAN ENERGY CODE AND LIGHTING QUALITY COMPLIANCE.

UNLESS EXEMPT, PROJECT MUST COMPLY WITH LIGHTING CONTROLS REQUIRMENTS DEFINED IN ASHRAE 90.1 2013. FOR SPECIFIC INFORMATION CONTACT GBA CONTROLS GROUP AT ASG@GASSERBUSH.COM OR 734-266-6705.

FOR ORDERING INQUIRIES CONTACT GASSER BUSH AT QUOTES@GASSERBUSH.COM OR 734-266-6705.

THIS DRAWING WAS GENERATED FROM AN ELECTRONIC IMAGE FOR ESTIMATION PURPOSE ONLY. LAYOUT TO BE VERIFIED IN FIELD BY OTHERS.

MOUNTING HEIGHT IS MEASURED FROM GRADE TO FACE OF FIXTURE. POLE HEIGHT SHOULD BE CALCULATED AS THE MOUNTING HEIGHT LESS BASE HEIGHT.

OPERATION GROW DBA BUTTER
EXTERIOR LIGHTING / PHOTOMETRICS
PREPARED FOR: FIVE EIGHTHS
GASSER BUSH ASSOCIATES
WWW.GASSERBUSH.COM

Designer
nae
Date
01/21/2022
Scale
Not to Scale
Drawing No.
E/ 1.11

ROTON 18 OUTDOOR PENDANT

TECH LIGHTING

The Roton pendant makes an impressive design statement in the simplicity and scale of its cylindrical geometry. Featuring a spun aluminum body and subtle diffuser, the Roton pendant houses a powerful LED light source designed to deliver softly diffused down lighting for controlled and distinctive illumination.

Outstanding protection against the elements:
- Powder coat finishes
- Stainless Steel mounting hardware
- Impact-resistant, UV stabilized lensing
- IP65 Rated

Adjustable distance from ceiling

SPECIFICATIONS

DELIVERED LUMENS	2566
WATTS	36
VOLTAGE	Universal 120-277V
DIMMING	0-10, ELV, TRIAC
LIGHT DISTRIBUTION	Symmetric
MOUNTING OPTIONS	Ceiling
ADJUSTABILITY	Adjustable stem length (3", 6" and 12"). Integrated ball joint that accommodates sloped ceiling up to 45°
CCT	2700K, 3000K or 4000K
CRI	90+
COLOR BINNING	3 Step
BUG RATING	B1-U2-G1
DARK SKY	Non-compliant
WET LISTED	IP65
GENERAL LISTING	ETL
CALIFORNIA TITLE 24	Can be used to comply with CEC 2019 Title 24 Part 6 for outdoor use. Registration with CEC Appliance Database not required.
START TEMP	-30°C
FIELD SERVICEABLE LED	Yes
CONSTRUCTION	Aluminum
HARDWARE	Stainless Steel
FINISH	Powder Coat
LED LIFETIME	L70: >60,000 Hours
WARRANTY*	5 Years
WEIGHT	9.8 lbs.

* Visit techlighting.com for specific warranty limitations and details.

Please note, hanging outdoor fixtures are not meant for areas with high winds which can cause damage to the fixture.



ROTON 18 PENDANT
shown in charcoal



ROTON 18 PENDANT
shown in bronze



ROTON 18 PENDANT
shown in black

ORDERING INFORMATION

PRODUCT	CRI / CCT	WIDTH	FINISH	VOLTAGE
700OPROT	927 90 CRI, 2700K 930 90 CRI, 3000K 940 90 CRI, 4000K	18 18"	Z BRONZE H CHARCOAL B BLACK	UNV 120-277V

RIGID STEM ONLY (ADJUSTABLE 3", 6" AND 12" LENGTHS)

techlighting.com

LED wall luminaires - two-sided light output

BEGA

Application
LED wall luminaires with directed narrow beam light distribution on two sides. Arranged individually or in groups, they are great design elements for a host of lighting applications.

Materials
Luminaire housing and faceplates constructed of die-cast marine grade, copper free (≤0.3% copper content) A360.0 aluminum alloy
Clear safety glass
Reflectors made of pure anodized aluminum
High temperature silicone gaskets
Mechanically captive stainless steel fasteners

NRTL listed to North American Standards, suitable for wet locations
Protection class IP 65
Weight: 6.6 lbs

Electrical

Operating voltage	120-277V AC
Minimum start temperature	-30° C
LED module wattage	24.2 W
System wattage	28.0 W
Controllability	0-10V dimmable
Color rendering index	Ra > 80
Luminaire lumens	2,216 lumens (3000K)
Lifetime at Ta = 15° C	420,000 h (L70)
Lifetime at Ta = 35° C	275,000 h (L70)

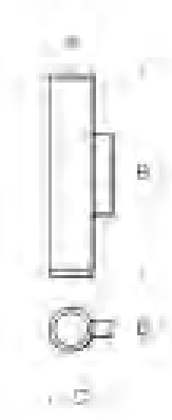
LED color temperature
☐ 4000K - Product number + **K4**
☐ 3500K - Product number + **K35**
☐ 3000K - Product number + **K3**
☐ 2700K - Product number + **K27**

BEGA can supply you with suitable LED replacement modules for up to 20 years after the purchase of LED luminaires - see website for details

Finish
All BEGA standard finishes are matte, textured polyester powder coat with minimum 3 mil thickness.
Available colors ☐ Black (BLK) ☐ White (WHT) ☐ RAL:
☐ Bronze (BRZ) ☐ Silver (SLV) ☐ CUS:

Type:
BEGA Product:
Project:
Modified:

Available Accessories
☐ **79 547** Surface mounted wiring box
See individual accessory spec sheet for details.





LED wall luminaire · two-sided light output

	LED	β	A	B	C	D	Required wiring box
24 008	24.2 W	16°	4⅛	19⅝	5⅞	1⅛	**19 537**

β = Beam angle

BEGA 1000 BEGA Way, Carpinteria, CA 93013 (805) 684-0533 info@bega-us.com

Due to the dynamic nature of lighting products and the associated technologies, luminaire data on this sheet is subject to change at the discretion of BEGA North America. For the most current technical data, please refer to bega-us.com
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LED wall luminaires - one-sided light output

BEGA

Application
LED wall luminaires with directed narrow beam light distribution on one side that can be oriented upward or downward. Arranged individually or in groups, they are great design elements for a host of lighting applications.

Materials
Luminaire housing and faceplate constructed of die-cast marine grade, copper free (≤0.3% copper content) A360.0 aluminum alloy
Clear safety glass
Reflector made of pure anodized aluminum
High temperature silicone gasket
Mechanically captive stainless steel fasteners

NRTL listed to North American Standards, suitable for wet locations
Protection class IP 65
Weight: 4.4 lbs

Electrical

Operating voltage	120-277V AC
Minimum start temperature	-30° C
LED module wattage	12.1 W
System wattage	14.0 W
Controllability	0-10V dimmable
Color rendering index	Ra > 80
Luminaire lumens	1,106 lumens (3000K)
Lifetime at Ta = 15° C	380,000 h (L70)
Lifetime at Ta = 40° C	230,000 h (L70)

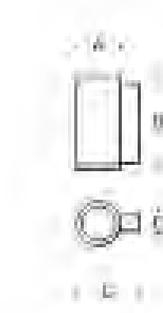
LED color temperature
☐ 4000K - Product number + **K4**
☐ 3500K - Product number + **K35**
☐ 3000K - Product number + **K3**
☐ 2700K - Product number + **K27**

BEGA can supply you with suitable LED replacement modules for up to 20 years after the purchase of LED luminaires - see website for details

Finish
All BEGA standard finishes are matte, textured polyester powder coat with minimum 3 mil thickness.
Available colors ☐ Black (BLK) ☐ White (WHT) ☐ RAL:
☐ Bronze (BRZ) ☐ Silver (SLV) ☐ CUS:

Type:
BEGA Product:
Project:
Modified:

Available Accessories
☐ **79 547** Surface mounted wiring box
See individual accessory spec sheet for details.





LED wall luminaire · one-sided light output

	LED	β	A	B	C	D	Required wiring box
24 034	12.1 W	16°	4⅛	9	6⅛	1⅛	**19 537**

β = Beam angle

BEGA 1000 BEGA Way, Carpinteria, CA 93013 (805) 684-0533 info@bega-us.com

Due to the dynamic nature of lighting products and the associated technologies, luminaire data on this sheet is subject to change at the discretion of BEGA North America. For the most current technical data, please refer to bega-us.com
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LED wall luminaire - adjustable gantry system

BEGA

Application
LED wall luminaire with asymmetrical light distribution and adjustable gantry outrigger arm.

Materials
Luminaire housing, faceplate and outrigger arm constructed of die-cast and extruded marine grade, copper free (≤0.3% copper content) A360.0 aluminum alloy
Clear safety glass
Reflector made of pure anodized aluminum
Silicone applied robotically to casting, plasma treated for increased adhesion
High temperature silicone gasket
Mechanically captive stainless steel fasteners

NRTL listed to North American Standards, suitable for wet locations
Protection class IP 65
Weight: 44.1 lbs

Electrical

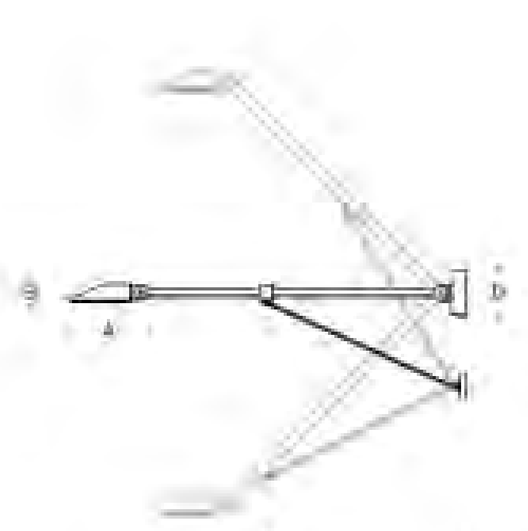
Operating voltage	120-277V AC
Minimum start temperature	-30° C
LED module wattage	55.3 W
System wattage	61.0 W
Controllability	0-10V dimmable
Color rendering index	Ra > 80
Luminaire lumens	6,674 lumens (4000K)
Lifetime at Ta = 15° C	232,000 h (L70)
Lifetime at Ta = 35° C	73,000 h (L70)

LED color temperature
☐ 4000K - Product number + **K4**
☐ 3500K - Product number + **K35**
☐ 3000K - Product number + **K3**
☐ 2700K - Product number + **K27**

BEGA can supply you with suitable LED replacement modules for up to 20 years after the purchase of LED luminaires - see website for details

Finish
All BEGA standard finishes are matte, textured polyester powder coat with minimum 3 mil thickness.
Available colors ☐ Black (BLK) ☐ White (WHT) ☐ RAL:
☐ Bronze (BRZ) ☐ Silver (SLV) ☐ CUS:

Type:
BEGA Product:
Project:
Modified:





LED wall luminaire · adjustable gantry system

	LED	A	B	C	D
24 509	55.3 W	16⅞	4½	90⅛	8⅛

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Pole-top luminaire - asymmetric distribution

BEGA

Application
LED pole-top luminaires with twin head and asymmetric light distribution ideal of the illumination of roadways, squares, driveways and pedestrian areas while meeting full cut-off requirements. Slip fits 3" O.D. pole top of tenon.

Materials
Luminaire housing and pole fitter constructed of die-cast marine grade, copper free (≤0.3% copper content) A360.0 aluminum alloy
Clear safety glass
Reflector made of pure anodized aluminum
High temperature silicone gasket
Mechanically captive stainless steel fasteners

NRTL listed to North American Standards, suitable for wet locations
Protection class IP 66
Weight: 14.1 lbs.

EPA (Effective projection area): 0.65 sq. ft.

Electrical

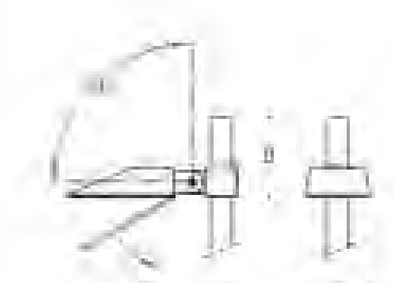
Operating voltage	120-277V AC
Minimum start temperature	-30° C
LED module wattage	55.3 W
System wattage	61.0 W
Controllability	0-10V dimmable
Color rendering index	Ra > 80
Luminaire lumens	6,672 lumens (4000K)
Lifetime at Ta = 15° C	232,000 h (L70)
Lifetime at Ta = 35° C	73,000 h (L70)

LED color temperature
4000K - Product number + **K4**
3500K - Product number + **K35**
3000K - Product number + **K3**
2700K - Product number + **K27**

BEGA can supply you with suitable LED replacement modules for up to 20 years after the purchase of LED luminaires - see website for details

Finish
All BEGA standard finishes are matte, textured polyester powder coat with minimum 3 mil thickness.
Available colors Black (BLK) White (WHT) RAL:
Bronze (BRZ) Silver (SLV) CUS:

Type:
BEGA Product:
Project:
Modified:





LED pole-top · asymmetric distribution

	LED	A	B	C
84 407	55.3 W	8⅞	11⅛	19⅛

Recommended for use with 14' to 25' poles

BEGA 1000 BEGA Way, Carpinteria, CA 93013 (805) 684-0533 info@bega-us.com

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LIL LED
LED Wall Luminaire

5 YEAR warranty

Catalog Number

Notes

Type

Introduction

LIL LED is a compact and energy efficient wall luminaire ideal for replacing small incandescent and CFL luminaires. Photocell and battery pack options make LIL LED great for installations above doors, balconies, garage or warehouse entrances, and security applications. Whether directly mounting to a recessed junction box, or using the back box accessory for conduit entry/through wiring, LIL LED has you covered!

Specifications

	Standard	With Battery Pack(EL)
Width:	5"	5-7/8"
Height:	5-1/8"	6-1/8"
Depth:	2-3/4"	4-1/4"
Weight:	1.5 lbs	3 lbs

Ordering Information

EXAMPLE: LIL LED 40K MVOLT WH

LIL LED

Series	Color Temperature	Voltage	Controls	Mounting	Finish
LIL LED	30K 3000 K[1] 40K 4000 K	MVOLT 120 / 277V[2]	(blank) None PE MVOLT button photocell[2,3] EL Battery pack[3]	(blank) None BB Back box accessory for conduit wiring[4]	DDBTXD Textured dark bronze WH White[5]

Accessories

LIL LED BB DDBTXD	Back box for conduit entry applications, dark bronze - CI Code *249WXH
LIL LED BB WH	Back box for conduit entry applications, white - CI Code *249WXJ

NOTES
1. Only available with EL option when order with DDBTXD
2. MVOLT driver operates on 120V and 277V (50/60Hz).
3. PE and EL cannot be ordered together.
4. Optional accessory for conduit entry wiring. Can be ordered with the luminaire or separately. Shipped separately. BB option is not available with emergency battery pack (EL) version.
5. Only available with PE or EL option when ordered in WH.

FEATURES & SPECIFICATIONS

INTENDED USE
The versatility of LIL LED combines a sleek, compact profile with photocell and emergency battery pack options to provide a great solution for wall mount applications. LIL LED is ideal for replacing up to 100W incandescent or 32W CFL luminaires in installations above doors, balconies, garage or warehouse entrances, and security applications. It can also be used for decorative and general lighting in outdoor environments.

CONSTRUCTION
Aluminum housing with white or textured dark bronze paint for lasting durability. The polycarbonate lens creates uniform light distribution, and it is UV resistant - great for outdoor environments!

OPTICS
Light engines are available in 3000K and 4000K CCTs. See Lighting Facts label and photometry reports for specific fixture performance.

ELECTRICAL
LED technology provides long operating life (L70/50,000 hours at 25°C). Electronic drivers have a power factor >90% and THD <20% and a minimum 2.5kV surge rating.

INSTALLATION
Easily mounts to recessed junction boxes or for surface mounting and conduit entry — with the back box with two 1/2" threaded conduit entry hubs.

The luminaire is mounted with the lens facing down. Neutral wire is required for three phase input.

LISTINGS
UL Listed to U.S. and Canadian safety standards for wet locations. Rated for -40° C minimum to 40° C maximum ambient temperature. Battery pack versions are rated to 0° C minimum. Tested in accordance with IESNA LM-79 and LM-80 standards.

DesignLights Consortium® (DLC) qualified product. Not all versions of this product may be DLC qualified. Please check the DLC Qualified Products List at to confirm which versions are qualified.

Eligible to be submitted for Title 20 and Title 24 compliance.

WARRANTY
5-year limited warranty. Complete warranty terms located at:

Note: Actual performance may differ as a result of end-user environment and application. All values are design or typical values, measured under laboratory conditions at 25°C. Specifications subject to change without notice.

LITHONIA LIGHTING
COMMERCIAL OUTDOOR

One Lithonia Way • Conyers, Georgia 30012 • Phone: 1-800-705-SERV (7378) •
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LIL LED
Rev. 03/31/20

OPERATION GROW DBA BUTTER
EXTERIOR LIGHTING / CUT SHEETS
PREPARED FOR: FIVE EIGHTHS
GASSER BUSH ASSOCIATES
WWW.GASSERBUSH.COM

Designer nae
Date 01/21/2022
Scale Not to Scale
Drawing No. E/ 1.12

DocuSign Envelope ID: 949CA19C-645D-415A-8243-49470F825ABE

SHARED PARKING AND ALLEY INGRESS/EGRESS AGREEMENT

THIS SHARED PARKING AND ALLEY INGRESS/EGRESS AGREEMENT ("Agreement") is made this 13th day of March, 2020, by and between BERKLEY MASONIC TEMPLE, having an address of 2290 E. Eleven Mile Rd. (the "Lessor"), and OPERATION GROW LLC, a Michigan limited liability company, having an address of 222 W. 11 Mile Rd., Berkley MI 48072 ("Lessee").

For good and valuable consideration, as set forth herein, Lessor and Lessee (collectively, the "Parties") agree as follows:

1. Lessor is granting Lessee the exclusive right to lease ten (10) parking spaces within Lessor's parking lot ("Parking Lot"), located at 2290 West 11 Mile Road, Berkley, MI 48072 (the "Property"), abutting 2222 W. 11 Mile Rd., on the East side of the Berkley Masonic Temple parking lot, seven (7) days per week, three hundred sixty five (365) days per year, from the hours of 7:00 a.m. to 6:00 p.m., for a period of three years (the "Term"), commencing on the date that Lessee (or its designee) obtains retail licensing from the City of Berkley (the "Effective Date") (collectively referred to as Lessee's "Parking Rights") for the sole use of its employees.

2. Lessee respects Lessor's occasional need for daytime parking when The Berkley Masonic Temple has special meetings. Lessor agrees to provide Lessee with ten (10) days written advance notice for any lodge event which might require use of the ten (10) parking spaces referenced in paragraph 1, so that Lessor can make alternative parking arrangements.

3. The Term would automatically renew additional periods of of three (3) years ("Subsequent Term"), unless either party provides written notice of its intention not to renew at least sixty (60) days before the expiration of the Term or of any Subsequent Term.

4. Lessee shall pay to Lessor $350 per month for the Term. For any Subsequent Term, Lessee shall pay Lessor a ten (10%) percent increase. Rent shall be paid each month by the 4th of each month, or is subject to a $10 per month late charge.

5. Lessee agrees to pay for signage for the leased spaces. Lessee intends to place such signage on its building in front of each space, with language stating or similarly conveying as follows: "butter Employee Parking Only Until 6 p.m., All Others Will be Towed."

6. In addition to the Parking Rights set forth in paragraphs 1 and 3 above, during the Term and any Subsequent Term, Lessee (including its members, employees, customers, licensees, agents, and designees) shall be given the non-exclusive, unrestricted and unlimited right to ingress and egress from the Property to Lessee's alley (the "Alley") which is adjacent to Lessee's Property. Lessor agrees not to block the Property or otherwise interfere with any ingress or egress on or from the Alley at any time of day during the Term or any Subsequent Term exercised.

7. Lessee agrees to allow Lessor the ability to utilize the parking lot on Lessee's Property, for one (1) calendar day per year, coinciding with the Woodward Dream Cruise, during the Term and any Subsequent Term.

8. This Agreement becomes legally effective and the initial rental term will begin when Lessee obtains retail licensing from the City of Berkley.

9. This Agreement shall be binding upon and inure to the benefit of the parties and their respective permitted successors and assigns. This Agreement constitutes the entire agreement and understanding of the parties pertaining to the subject matter contained herein and supersedes all prior and contemporaneous agreements, representations and understandings, whether written or oral, as to the matters herein set forth. This Agreement shall be governed and construed under the laws of the State of Michigan.

10. Lessor agrees to continue to be responsible for maintenance and repair of the parking lot, including snowplowing as necessary.

[*Signatures on Follow Page*]

DocuSign Envelope ID: 949CA19C-645D-415A-8243-49470F825ABE

IN WITNESS WHEREOF, the parties hereto have executed this Shared Parking and Alley Ingress/Egress Agreement on the day and year first above written.

LESSOR:

BERKLEY MASONIC TEMPLE

By: DocuSigned by: Paul Swayze 7407D9DC81EE4D8...

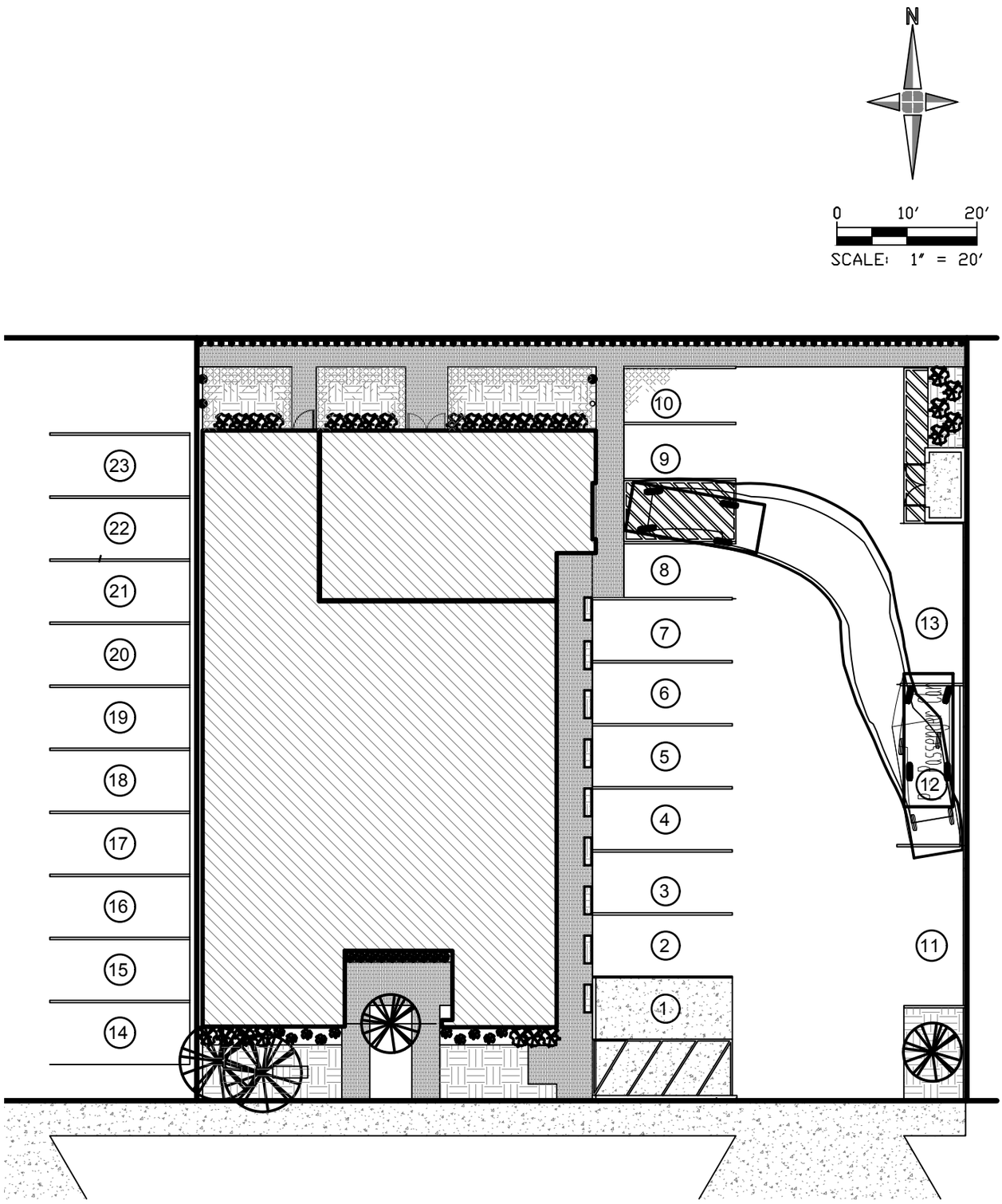
Name: Paul Swayze
Its: President

LESSEE:

OPERATION GROW LLC

By: DocuSigned by: Daniel Amori 848E2D66AA0041C...

Name: Daniel Amori
Its: Chief Compliance Officer



Know what's **below.**
Call before you dig.

BERKLEY BUTTER DISPENSARY | CITY OF BERKLEY, OAKLAND COUNTY, MICHIGAN | PARALLEL PARKING MOVEMENT

giffels webster
Engineers Surveyors Planners
Landscape Architects

1025 East Maple Road
Suite 100
Birmingham, MI 48009
p (248) 852-3100
f (313) 962-5068
www.giffelswebster.com

Executive:	MP
Manager:	JKA
Designer:	JKA
Quality Control:	MP
Section:	17
	T-01-N R-11-E

Developed For:

FIVE/EIGHTS ARCHITECTS

2321 WOLCOT STREET
FERNDALE, MI 48220

248-981-8744

DATE:	ISSUE:
03-03-2020	PARKING LOT MOVEMENT STUDY

Date:	03 - 03 - 2020
Scale:	1"=20'
Sheet:	C1
Project:	19823.00

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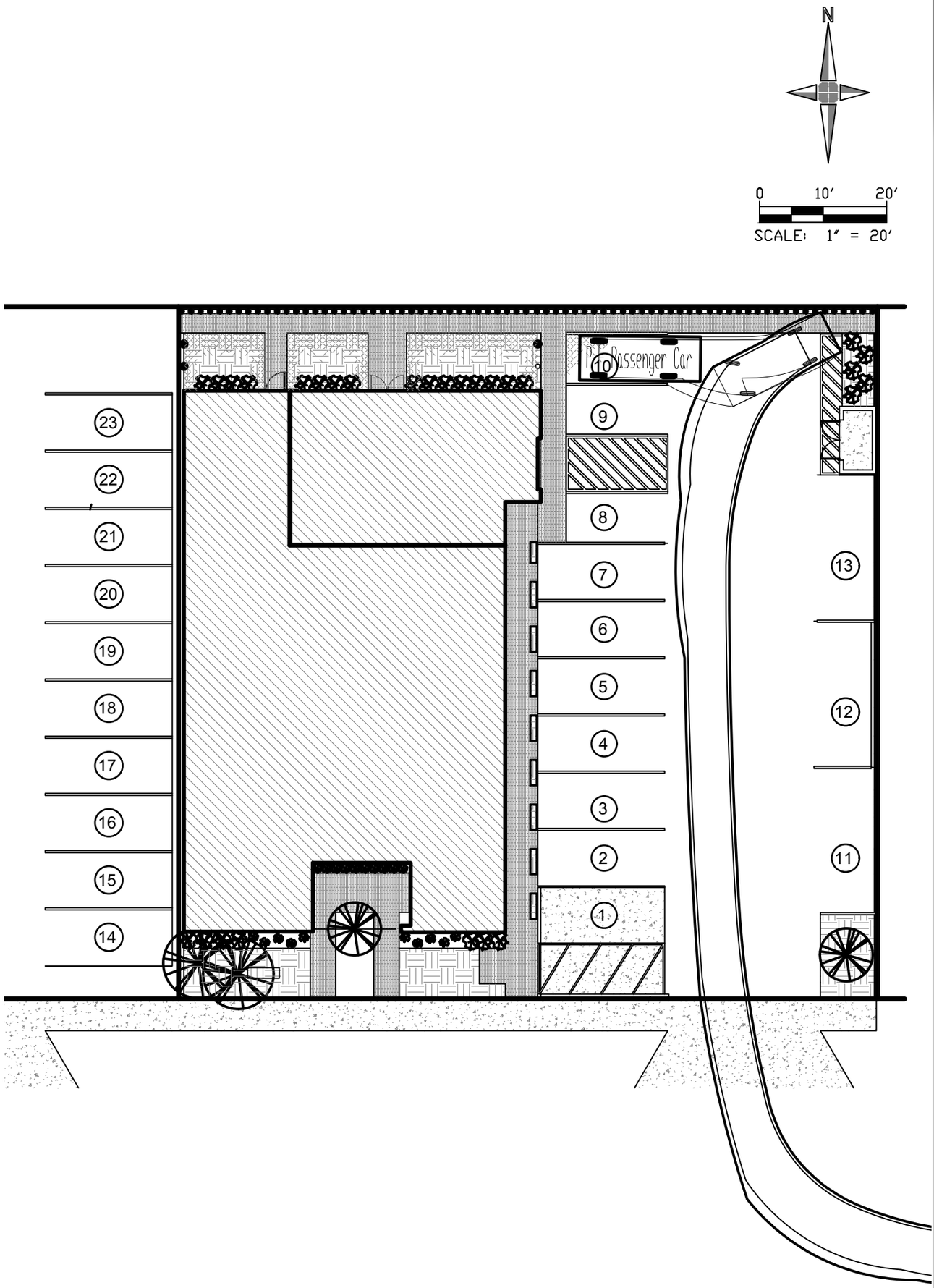

Know what's **below.**
Call before you dig.

BERKLEY BUTTER DISPENSARY | CITY OF BERKLEY, OAKLAND COUNTY, MICHIGAN | SPACE 10 BACKING MOVEMENT

giffels webster
Engineers Surveyors Planners
Landscape Architects

1025 East Maple Road
Suite 100
Birmingham, MI 48009
p (248) 852-3100
f (313) 962-5068
www.giffelswebster.com

Executive:	MP
Manager:	JKA
Designer:	JKA
Quality Control:	MP
Section:	17
	T-01-N R-11-E

Developed For:

FIVE/EIGHTS ARCHITECTS

2321 WOLCOT STREET
FERNDALE, MI 48220

248-981-8744

DATE:	ISSUE:
03-03-2020	PARKING LOT MOVEMENT STUDY

Date:	03 - 03 - 2020
Scale:	1"=20'
Sheet:	C2
Project:	19823.00

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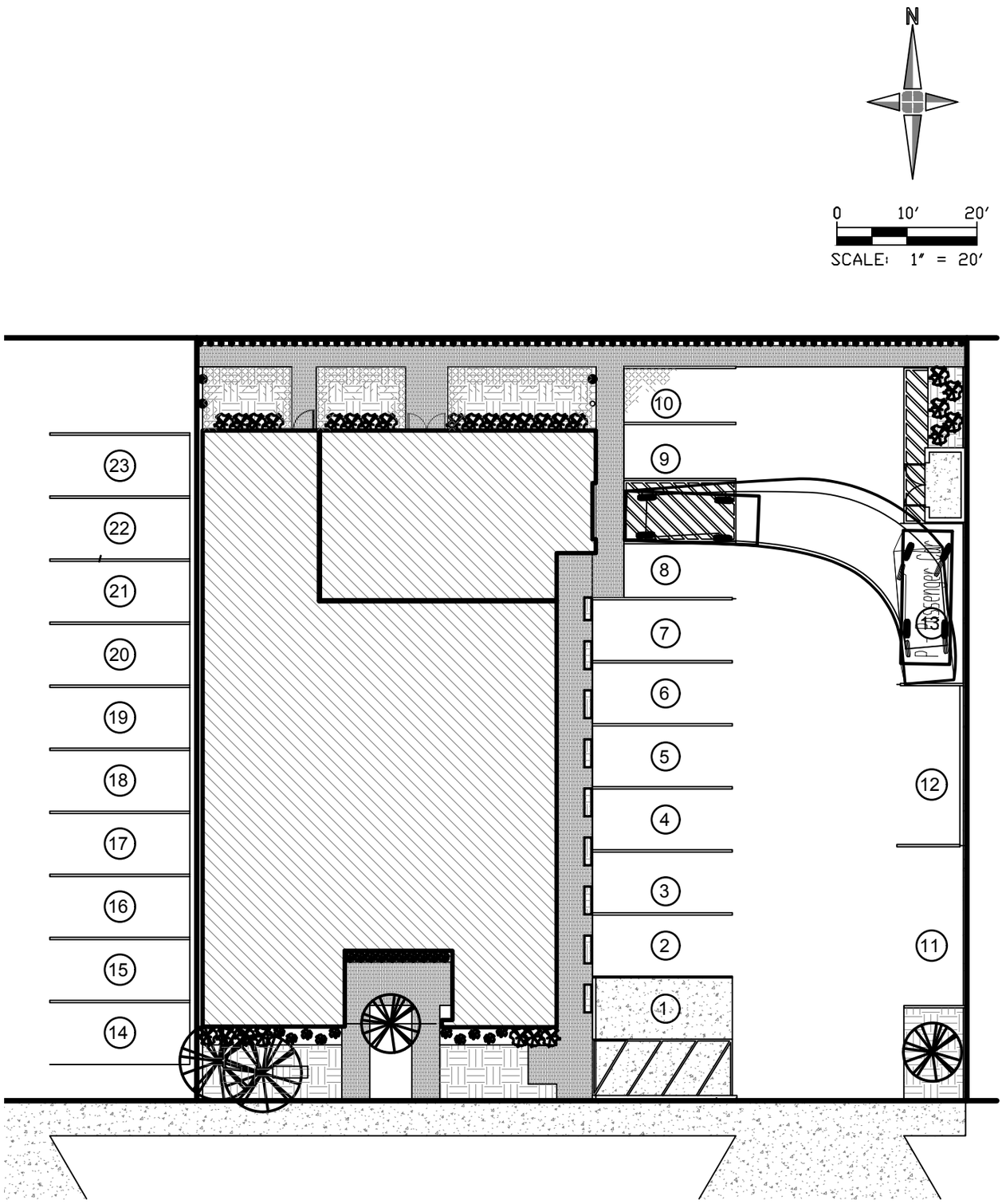

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Call before you dig.

BERKLEY BUTTER DISPENSARY | CITY OF BERKLEY, OAKLAND COUNTY, MICHIGAN | SPACE 13 TURNING MOVEMENT

giffels webster
Engineers Surveyors Planners
Landscape Architects

1025 East Maple Road
Suite 100
Birmingham, MI 48009
p (248) 852-3100
f (313) 962-5068
www.giffelswebster.com

Executive:	MP
Manager:	JKA
Designer:	JKA
Quality Control:	MP
Section:	17
	T-01-N R-11-E

Developed For:

FIVE/EIGHTS ARCHITECTS

2321 WOLCOT STREET
FERNDALE, MI 48220

248-981-8744

DATE:	ISSUE:
03-03-2020	PARKING LOT MOVEMENT STUDY

Date:	03 - 03 - 2020
Scale:	1"=20'
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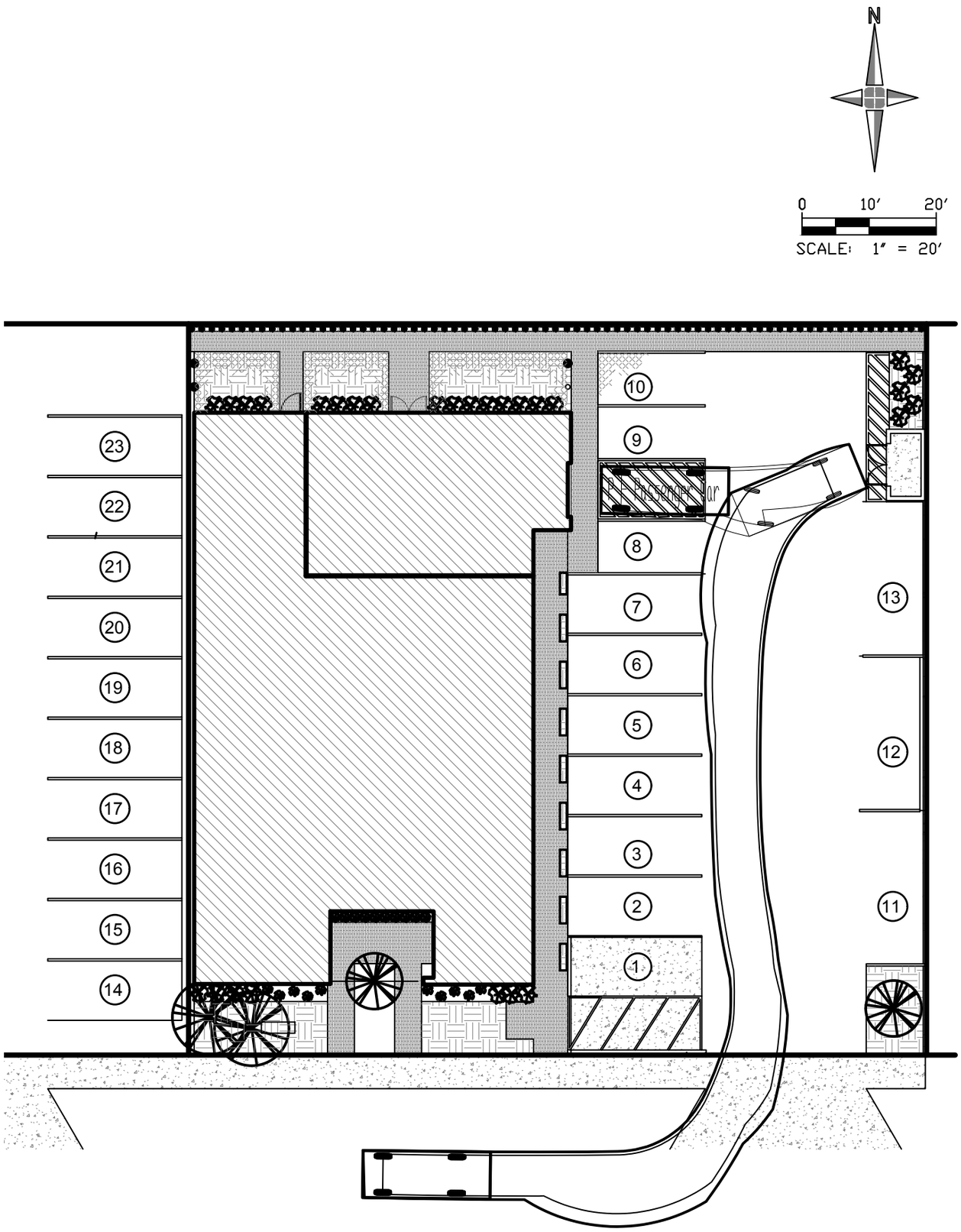

Know what's **below.**
Call before you dig.

BERKLEY BUTTER DISPENSARY | CITY OF BERKLEY, OAKLAND COUNTY, MICHIGAN | TURN AROUND MOVEMENT

giffels webster
Engineers Surveyors Planners
Landscape Architects

1025 East Maple Road
Suite 100
Birmingham, MI 48009
p (248) 852-3100
f (313) 962-5068
www.giffelswebster.com

Executive:	MP
Manager:	JKA
Designer:	JKA
Quality Control:	MP
Section:	17
	T-01-N R-11-E

Developed For:

FIVE/EIGHTS ARCHITECTS

2321 WOLCOT STREET
FERNDALE, MI 48220

248-981-8744

DATE:	ISSUE:
03-03-2020	PARKING LOT MOVEMENT STUDY

Date:	03 - 03 - 2020
Scale:	1"=20'
Sheet:	C4
Project:	19823.00

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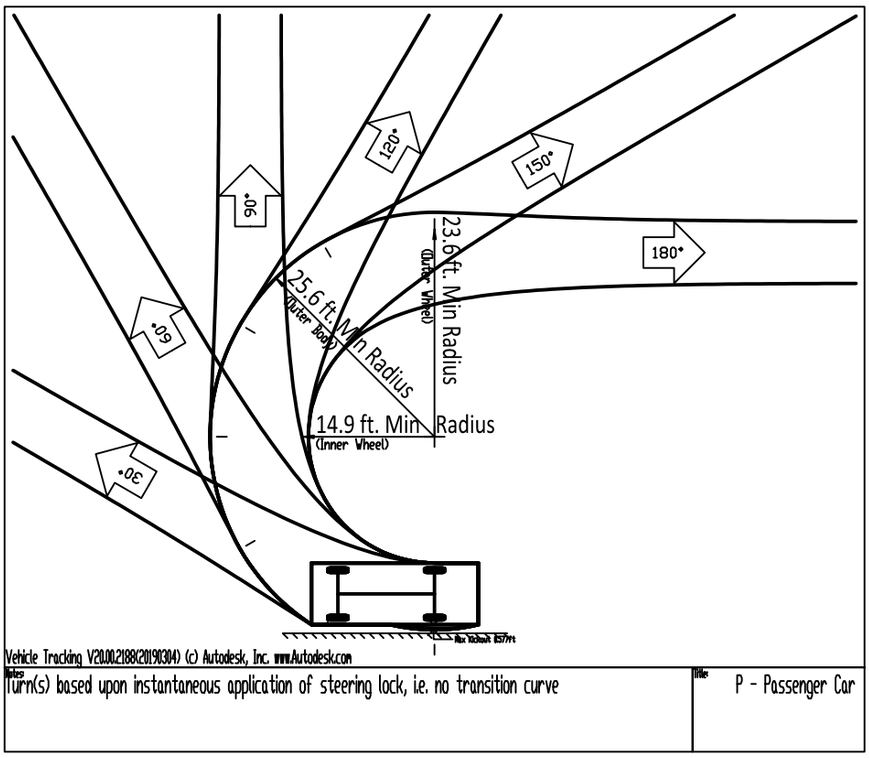

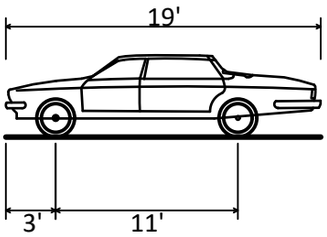

P - Passenger Car	
Overall Length	19.0 FT
Overall Width	7.0 FT
Overall Body Height	4.3 FT
Min Body Ground Clearance	1.1 FT
Track Width	6.0 FT
Lock-to-lock time	4.00s
Max Steering Angle (Virtual)	31.60°

811
Know what's **below.**
Call before you dig.

BERKLEY BUTTER DISPENSARY | CITY OF BERKLEY, OAKLAND COUNTY, MICHIGAN | VEHICLE TEMPLATES

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1025 East Maple Road
Suite 100
Birmingham, MI 48009
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Developed For:
FIVE/EIGHTS ARCHITECTS
2321 WOLCOT STREET
FERNDALE, MI 48220
248-981-8744

DATE:	ISSUE:
03-03-2020	PARKING LOT MOVEMENT STUDY

Date:	03 - 03 - 2020
Scale:	1"=20'
Sheet:	C5
Project:	19823.00

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CITY OF BERKLEY
COMMUNITY DEVELOPMENT
3338 COOLIDGE HWY, BERKLEY, MICHIGAN 48072

MEMORANDUM

TO: Berkley Planning Commission

FROM: Megan Masson-Minock; Interim Community Development Director

SUBJECT: **PSP-02-22: 2222 W. Eleven Mile. Proposed building renovation for marijuana provisioning center.**
Sketch Plan Review

DATE: February 18, 2022

The applicant has asked for a sketch plan review for the proposed building renovation for a marijuana provisioning center at 2222 W. Eleven Mile Road. Section 138-681 – Approval Process allow sketch plan review by the Planning Commission as follows:

> "*Sketch plan (optional).* An item may be submitted to the planning commission for informal discussion. No approval shall be granted. However, the applicant may wish to present and discuss a proposed project and any anticipated problems before applying for site plan approval."

Attached are reviews the City Department of Public Works (DPW), Hubbell, Roth & Clark (HRC) and Carlisle Wortman Associates (CWA). The applicant and their design team met with staff and consultants to go over the reviews on Wednesday, February , 2022. After that meeting, the applicant requested a sketch plan review.

At that meeting, the group identified an issue on the rear yard screen wall that needs Planning Commission input. There is a sewer pipe in the northwest corner of the site, for which an easement will be required. The easement would not allow a structure to be built within the easement. However, a screen wall is required along the property line by the Zoning Ordinance. DPW is also concerned that the masonry wall required will cause pooling of storm water on the subject site and adjacent properties. The Planning Commission can waive or modify that requirement.

Finally, a Planning Commissioner inquired about whether the Huntington Woods Christian School was considered for the review of the license and site plan. In consultation with the City Attorney, it was determined that since Huntington Woods Christian School is a pre-school that it is not subject to the requirement in Section 138-528 (c) that the site "must not be within 1,000 feet of a pre-existing public or private school providing education in kindergarten or any of grades 1 through 12."

Carlisle | Wortman
ASSOCIATES, INC.
117 NORTH FIRST STREET SUITE 70 ANN ARBOR, MI 48104 734.662.2200 734.662.1935 FAX

Date: February 10, 2022

Site Plan Review
For
City of Berkley, Michigan

Applicant: Grant Jefferies, Five-Eighths

Project Name: Butter Provisioning Center

Plan Date: January 21, 2022

Location: 2222 W. Eleven Mile Road

Zoning: Industrial District

Action Requested: Site Plan Approval

SITE DESCRIPTION

The applicant is proposing to repurpose the existing building at 2222 W. Eleven Mile Road. The approximate 4,200 square foot, one-story building, will be split into two (2) tenant spaces. A 3,300 square foot space will be repurposed for a marihuana provisioning center. The remaining 900 square foot space will be repurposed for a future light industrial/warehousing use.

The building is not proposed to expand. However, the applicant proposes the following site improvements:

- Landscape improvements
- Mural (public art)

Richard K. Carlisle, *President* Douglas J. Lewan, *Executive Vice President* John L. Enos, *Principal*
David Scurto, *Principal* Benjamin R. Carlisle, *Principal* Sally M. Elmiger, *Principal* Craig Strong, *Principal* R. Donald Wortman, *Principal*
Laura K. Kreps, *Associate* Paul Montagno, *Associate*

- Green infrastructure
  - Permable paving
  - Stormwater planters/parking blocks
  - Turf paving pedestrian alley
  - Rain barrells
- Streetscape improvements
  - Bike rakes
  - Bike repair stand
  - Bench
  - Landscaping
  - Recycle/trash receptacles
  - Rain capture

The site is zoned Industrial District. A marihuana use is a permitted use but must meet the zoning requirements set forth in Section 138-528 Marihuana Business Regulations.

Site Location:



Proposed Use of Subject Parcel:

4,200 sq/ft mixed tenant commercial building including a marihuana provisioning use.

Surrounding Property Details:

Direction	Zoning	Use
North	Cemetery District	Single Family Residential
South	Huntington Woods	Single Family Residential
East	Industrial District / Office District	Office
West	Industrial District	Institutional (Masonic Temple)

Items to be addressed: *None.*

NATURAL FEATURES

The site has been graded for an office building and parking lot. There are no existing natural resources.

BUILDING ARRANGEMENT AND SITE DESIGN

The site and building layout will remain in its current configuration.

Items to be addressed: *None*

AREA, WIDTH, HEIGHT, SETBACKS

Sec. 138-526. - Schedule of regulations of the Zoning Ordinance establishes the dimensional requirements for the Industrial District.

	Required / Allowed	Provided	Compliance
Front (Eleven Mile) Front yard setbacks shall be ten feet or equal to the setback of the adjacent buildings, whichever is less.	10-feet	10-feet, seven-inches	Complies
Side (east and west) No side yards are required along the interior side lot lines except as otherwise specified in the building	East: 0-feet West: 53-feet	Greater than 0 feet	Complies

	Required / Allowed	Provided	Compliance
code. On the exterior side yard that borders on a residential district, there shall be provided a setback of at least ten feet on the side or residential street.			
Rear (South)	10-foot minimum setback	12-feet, 9-inches	Complies
Building Height	40-feet maximum height	15-feet, 4-inches	Complies

Items to be addressed: *None*

PARKING

Section 138-219 of the Zoning Ordinance requires:

	Required	Provided
Retail: One per 225 square feet of usable floor area	2,318 usable square feet / 225 = 10.3 spaces	13 onsite and 10 offsite. See discussion below
Wholesale and warehouse establishments: One per 250 square feet of usable floor area	645 usable square feet / 225 = 2.6 spaces	
Barrier Free	1	1
Bicycle Parking	2	2
Loading	0	0
Total	**13 spaces**	**13 spaces onsite and 10 offsite plus 2 bike spaces**

The applicant is proposing shared parking with the adjacent Masonic Temple, for employee parking. The applicant should provide the shared parking agreement for the City to review to confirm the agreement does not create parking issues for both the applicant and Masonic Temple.

Items to be Addressed: *Provide shared parking agreement.*

SITE ACCESS AND CIRCULATION

Site access and circulation remain as currently situated. The applicant did not apply a trash pickup or fire engine turning template. The applicant should apply appropriate template to confirm site circulation is sufficient to provide safe egress and access to the site.

Items to be Addressed: *Apply appropriate template to confirm site circulation is sufficient.*

LANDSCAPING AND SITE AMENITIES

A landscaping plan has been provided on sheet L-1.1 and L-1.2. The applicant is proposing a robust plan which includes a native landscaping/grasses/wildflower theme with building planting, ROW planting, parking lot planting, and a green roof. As set forth in section 130-37, when the development of any property requiring site plan approval occurs, the City Planning Commission shall review landscaping plans and may require additional landscaping to be planted on or near the site consistent with the elements of the adopted City Master Plan.

Screening Along Northern Property Line:

The applicant proposes to screen the property along the northern property with a masonry screen wall. The applicant should provide an elevation of wall.

Trash Enclosure:

The applicant is providing trash enclosure with 6-foot-tall masonry screen wall along eastern property line. The applicant should provide an elevation of masonry screen wall.

Items to be Addressed*: 1) Provide elevation of masonry screen wall along northern property line; 2). Provide elevation of trash enclosure screen wall.*

PHOTOMETRICS

A photometric plan was provided. The applicant is proposing two (2) parking lot pole lights, and twenty-six (26) building lights in the form of sconces, wall packs, and pendants. We note that lights along the west elevation extend over the western property line. The applicant should provide approval from the Masonic Temple that they permit the lights to extend into their property.

In addition, twenty-six (26) building lights seem excessive. Of particular concern is over lighting the site and impacts upon adjacent properties. The applicant should explain the lighting plan and confirm the need for the proposed amount of lighting.

Items to be Addressed: *1). Confirm approval from the Masonic Temple that they permit the lights to extend into their property; and 2). Explain the lighting plan and confirm the need for the proposed amount of lighting.*

EXTERIOR APPLIANCES

Applicant has shown exterior appliances (air conditioners, generators, etc.) on the roof plan, but has not shown elevations that confirm they are in compliance with Sec. 138-73.

Items to be Addressed: *Confirm compliance with Sec. 138-73.*

FLOOR PLAN AND ELEVATIONS

Floor plans and elevations have been provided. The applicant is making significant elevation improvements to the existing building including glass curtain wall, metal overhang, painting brick, glazed tile, green roof, and public art mural.

Items to be Addressed: *None*

MARIHUANA BUSINESS REGULATIONS

Section 138-528 Marihuana Business Regulations, the site plan shall be reviewed and approved by the Planning Commission upon finding that:

a) A marihuana business must front on a major thoroughfare with the primary ingress/egress onto a major thoroughfare.

CWA Response: The marihuana business fronts on Eleven Mile Road, with ingress/egress onto a major throughfare.

b) The marihuana business must have all applicable state and local licenses and approvals to operate.

CWA Response: The marihuana business will be required to obtain all applicable state license prior to any final approvals.

c) The property where the marihuana business will be located must be entirely within the boundaries of the city and must not be within 1,000 feet of a pre-existing public or private school providing education in kindergarten or any of grades 1 through 12.

CWA Response: The marihuana business is located entirely within the boundaries of the City. The marihuana business is not within 1,000 feet with any pre-existing public or private school providing education in kindergarten or any of grades 1 through 12.

d) Notwithstanding any other provision in the zoning ordinance, a marihuana business must operate within a fully enclosed building.

CWA Response: The marihuana business will operate within a fully enclosed building.

e) Pursuant to article XV of chapter 30 of the Berkley City Code, all marihuana business license approvals are subject to the following:

i. Public notice requirements as outlined in section 30-806; and

ii. Site plan approval from the planning commission must be obtained prior to receiving license approval from the city council. Failure to do so will result in license denial as outlined in section 30-813.

CWA Response: 1). Public notice requirement was met; and 2). The applicant is seeking site plan approval from the Planning Commission. If granted site plan approval, the applicant would then seek license approval from the City Council.

Items to be Addressed: *None*

RECOMMENDATION

Overall, the applicant is making a significant investment into the site as noted in our report. However, prior to preliminary site plan approval, we recommend the following items are addressed:

1. *Provide shared parking agreement.*
2. *Apply appropriate template to confirm site circulation is sufficient.*
3. *Provide elevation of masonry screen wall along northern property line.*
4. *Provide elevation of trash enclosure screen wall.*
5. *Confirm approval from the Masonic Temple that they permit the lights to extend into their property.*
6. *Explain the lighting plan and confirm the need for the proposed amount of lighting.*
7. *Confirm that requirements of Section 138-99 are met.*

Sincerely,

CARLISLE/WORTMAN ASSOC., INC.
Benjamin R. Carlisle, LEED AP, AICP

HUBBELL, ROTH & CLARK, INC
CONSULTING ENGINEERS SINCE 1915

MAILING: PO Box 824
Bloomfield Hills, MI 48303-0824
SHIPPING: 555 Hulet Drive
Bloomfield Hills, MI 48302-0360
PHONE: 248-454-6300
WEBSITE: hrcengr.com

February 8, 2022

City of Berkley
3338 Coolidge Highway
Berkley, Michigan 48072

Attention: Ms. Megan Masson-Minock, Community Development Director
Mr. Matthew Baumgarten, City Manager

Re: Butter Provisioning Center
2222 W Eleven Mile Rd
Engineering Site Plan – Review No. 1
City of Berkley, MI

HRC Job No. 20200909.02

Dear Ms. Masson-Minock and Mr. Baumgarten:

As Consulting Engineers for the City of Berkley, and in accordance with your request, we have completed the Engineering Site Plan review of the proposed subject development for compliance with the City of Berkley's engineering and site plan requirements. The plans were prepared by Five-Eighths Architects of Ferndale, Michigan with the engineering site plan created by Giffels-Webster of Detroit, Michigan. The plans have an issue date of January 21, 2022. The proposed project scope includes the renovation of the existing building and replacement of the existing parking lot and other site features. We hereby offer the following comments:

General:

1. The proposed compact car spaces and ADA parking space must have signage clearly stating as such. These signs must be included in the plans.

2. A traffic control plan and sequence of construction must be added to the plans, including an estimated duration for any lane closures that may be required.

3. All existing utilities and service leads must be shown on the plans.

4. The site plan indicates that a geotechnical investigation was performed and a report prepared for this project. The report must be submitted along with the plans in order to evaluate the feasibility of the proposed stormwater management system. The soil logs from the investigation must be shown on the plans, including the elevation of the groundwater table, soil types encountered, and the written report indicating the design recommendations or comments on the proposed stormwater collection system.

5. The extent of demolition and building modifications are unclear from the plans. A separate demolition sheet must be provided in the plan set that shows all site demolition work including any exterior building work which may impact the site.

6. Cross-sectional details for all proposed pavement, driveways, curbs, sidewalks, and sidewalk ramps must be provided on the plans.

7. The extent of curb, sidewalk, and pavement removal and replacement must be clearly shown on the plans. In addition, the City may require additional sections of existing curb and gutter and sidewalks along 11 Mile Road to be removed and replaced as part of the proposed project in order to address the current deteriorated conditions and will defer comment to the City.

Water and Fire Protection Services:

1. The plans must include REU value calculations demonstrating that the existing water lead is sufficiently sized to be reused for the proposed new establishment.

Storm Drainage and Detention/Sanitary Sewer:

1. Stormwater runoff calculations are provided using a 100-year, 24-hour storm event and appear to show that the proposed pavement section will provide adequate storage for the site. This must be confirmed through details which show the depth and materials of the proposed section and by submitting the geotechnical report to verify feasibility of the proposed section for the site soil characteristics, as stated above.

2. The site plan includes a note that the existing downspouts direct water directly into the existing parking lots on each side of the building. Note that downspouts are not permitted to discharge directly into the combined sewer system and must be directed onto grass, landscape or other green space area. They may also be directed through the proposed restricted-outlet structure. The location of the proposed downspouts and the above note must be shown on the plans.

3. Details of the outlet control structure and the connection to the existing combined system must be shown on the plans.

4. The developer will be required to prepare and enter into a perpetuity maintenance agreement with the City for the proposed private stormwater systems. The Applicant must contact the City DPW regarding this item prior to commencing construction.

5. Rim and invert grades are missing for the rear yard basins and the rear east cleanout.

6. A note indicates the existing building sanitary lead will remain in place and be re-utilized. The applicant must have the sanitary lead inspected by a licensed contractor/plumber and the video footage submitted to the City verifying the lead is suitable for re-use prior to construction.

Recommendation:

Based on our aforementioned comments, we do not recommend approval of the proposed Site Plan at this time. The plans must be revised to address all of the above comments and resubmitted to the City of Berkley for further review.

If you have any questions or require any additional information, please contact the undersigned.

Very truly yours,

HUBBELL, ROTH & CLARK, INC.

Edward D. Zmich
Project Manager

Mitch Stark
Review Engineer

EDZ/MAS/mas
pc: City of Berkley; Mr. Derrick Schueller, Mr. Shawn Young
HRC; R. Alix, File
Giffels-Webster; Joseph Anderson
Five-Eighths; Grant Jeffries

Dept. of Public Works

Transmittal Memo

To: Megan Masson-Minock, Interim Community Development Director (via email)

Cc: Kim Anderson, Community Development Department (via email)
Shawn Young, DPW Foreman (via email)
Eddie Zmich, HRC (via email)

From: Derrick Schueller, DPW Director

Date: January 28, 2022

Subject: Butter Provisioning Center & Tenant Suite
2222 11 Mile
Site Plan Review #1

We have reviewed the site plans provided by the Community Development Department on January 25 and prepared by Five Eighths and Giffels Webster. Please find below our initial comments:

1. The site plans will be reviewed by the City's engineering consultant, Hubbell, Roth & Clark (HRC). Among other things, HRC will review the geotechnical report, storm water detention calculations and grading.
2. The City Fire Marshal will provide feedback on fire suppression and fire hydrant coverage.
3. The previously requested Design Miss Dig ticket number shall be indicated on the Topographic Survey and Engineering Site Plan.
4. A Demolition Sheet shall be added to the plan set indicating all removals including pavement and pipe.
5. We recommend the existing sanitary lead and water service be examined by a licensed plumber prior to site plan resubmittal with the lines added to the drawings. The replacement of these pipes, due to condition or material type, may impact site layout and scope.
6. An existing public sewer is shown on the north side of the property. Either the existing easement shall be shown via title documentation or the applicant will need to grant a half width (10') public easement for this City utility. Sample easement documents can be provided. Note new physical obstructions, like a screening wall, shall not be placed within the easement to allow for future City maintenance and repair.
7. We defer to the City Attorney on the placement of new items in the public right-of-way greenbelt (e.g. bollards and raised planters). These items may be a liability for the community and will not be replaced if utility work is required in the future.
8. Please note the proposed stormwater management system will be a private system under the maintenance of the property owner. A template approved by the City Attorney is attached for use. Exhibits will need to be prepared by the applicant and included with the document.
9. The applicant shall verify the new development will not negatively impact the adjacent properties and existing drainage conditions. The new masonry wall may end up trapping surface runoff.
10. Note the Community Development Department will review the striping plan for verification of number of stalls required, sizing, handicap considerations and general site circulation.

11. A traffic control plan shall be added to the plan set to account for the proposed work in the 11 Mile roadway.
12. A Storm Water Service Fixed Charge will be assessed upon completion of construction. This charge will be reflected on the regular utility bill and is based on an Equivalent Residential Units (impervious area).

A response letter from the applicant to the comments noted above would be helpful in subsequent reviews.

Feel free to call with any questions or concerns. Thank you.

AGREEMENT FOR
STORM WATER SYSTEM MAINTENANCE

This Agreement is made on _____, by _____, ("Developer"), a (corporation, limited liability company, partnership) whose address is _____; and the CITY OF BERKLEY (the "City"), whose address is 3888 Coolidge Hwy, Berkley, MI 48879.

WHEREAS, Developer owns and proposes to develop the Property described in attached **Exhibit A**; and

WHEREAS, the proposed development of the Property will alter the natural flow of surface and storm water drainage; and

WHEREAS, Developer has proposed, and the City has approved, a storm water management system (the "System") as described and depicted in the plan attached as **Exhibit B**; and

WHEREAS, the parties will benefit from the proper operation, use, and maintenance of the System and enter into this agreement to provide for the same.

THEREFORE, the parties agree:

1. **Use of the System:**

Components of the System, including any and all water conveyance, detention and water quality treatment facilities and devices, pumping system, storm sewer pipe, catch basins, manholes, end-sections, ditches, swales, open water courses and rip-rap, shall be used solely for the purpose of conveying, detaining and treating storm and surface drainage on the property until such time as: (i) The City determines and notifies Developer or Developer's successors, grantees or assigns, in writing, that it is no longer necessary to convey, detain or treat the storm and surface drainage; and (ii) An adequate alternative for conveying, detaining and treating storm and surface drainage has been provided which is acceptable to the City and which includes the granting of any easements to the City or third parties as may be required or necessary for the alternative drainage system.

2. **Maintenance:**

A. Developer shall be responsible for the proper maintenance, repair and replacement of the System and all parts thereof as detailed in the Maintenance Plan attached as **Exhibit C.**

B. Proper maintenance of the System shall include, but is not limited to: (i) Removing accumulated sediment, trash and debris from the detention basin and at inlet pipes; (ii) Managing deleterious vegetative growth; (iii) Maintaining storm sewer, structures, end-sections and safety features; (iv) Controlling the effects of erosion; (v) Inspection and cleaning of the water quality treatment device; (vi) Inspection of inlet and outlet pipes for structural integrity; (vii) Inspection and replacement of riprap at inlet pipes; (viii) Inspection and cleaning of the storm sewer and catch basins upstream from the detention basin; (ix) Inspection and replacement of stone around the outlet pipe; and (vi) Any other maintenance that is reasonable and necessary to facilitate and continue the proper operation and use of the System.

3. **Action by City:**

If, at any time, Developer or Developer's successors, grantees or assigns neglect or fail to properly maintain the System or any part thereof, the City may notify Developer or Developer's successors, grantees or assigns. The notice shall be in writing and shall list and describe maintenance deficiencies and demand that they be corrected within thirty (30) days.

The notice shall further specify a date and place for a hearing to be held at least fourteen (14) days after the date of the notice before the City Council, or such other board or official as the City Council may designate. At the hearing, the City Council (or other designated board or official) may affirm or modify the list and description of maintenance deficiencies and, for good cause shown, may extend the time for the deficiencies to be corrected.

Thereafter, if the maintenance deficiencies are not corrected within the time allowed, the City may undertake the necessary corrective actions, and the City may maintain the System for up to one (1) year. Such maintenance of the System by the City shall not be construed to be a trespass or a taking of the Property, nor shall the City's actions vest in the public any right to enter or use the Property. Thereafter, if Developer or Developer's successors, grantees or assigns do not properly maintain the System, the City may, after providing similar written notice, schedule and hold another hearing to determine whether the City should maintain the System for another year, and subject to a similar notice, hearing and determination, in subsequent years.

In the event the City determines an emergency or public nuisance condition caused by or relating to the System threatens the public health, safety or general welfare, the City shall have the right to immediately and without notice enter the Property and undertake appropriate corrective action.

4. **Charges:**

The City shall charge to the current owner of the Property the cost of maintenance or other corrective action undertaken by the City under this agreement, plus a ten percent (10%) administrative fee. If not timely paid, the City may place the charges on the City's tax roll, which charges shall be a lien on the Property and shall be collectable and enforceable in the same manner general property taxes are collected and enforced.

5. **Notice:**

Any notices required under this agreement shall be sent by certified mail to the address for each party set forth below, or to such other addresses as such party may notify the other parties in writing:

To _____: _____

_____

To the City:

City Manager
City of Berkley
3888 Coolidge Hwy
Berkley, MI 48879

6. **Successors and Assigns:**

This agreement shall bind and inure to the benefit of the parties and their respective successors, grantees and assigns. The benefits, burdens, rights, obligations and responsibilities hereunder shall run with the land and shall bind all current and future owners of the Property and any divisions thereof.

7. **Recording of Agreement:**

This agreement shall be recorded at the Oakland County Register of Deeds.

By: _____

Its: _____

CITY OF BERKLEY

By: _____
Matthew Baumgarten, City Manager

STATE OF MICHIGAN
:ss
COUNTY OF _____

This agreement was acknowledged before me on _____, by _____
_____ of _____ on behalf of the _____.

_____
_____ Notary public
_____ County, Michigan
My commission expires: _____

STATE OF MICHIGAN
:ss
COUNTY OF OAKLAND

This agreement was acknowledged before me on _____, by Matthew Baumgarten, City Manager, of the City of Berkley, on behalf of the City.

_____
_____ Notary public
_____ County, Michigan
My commission expires: _____

Drafted by:
John D. Staran, Esq.
2055 Orchard Lake Road
Sylvan Lake, MI 48320

When Recorded Return to:
City Clerk
City of Berkley
3888 Coolidge Hwy.
Berkley, MI 48879

Comm Dev Director <comdirector@berkleymich.net>

Marijuana retailer on 11 mile

1 message

Cate Desjardins <catedesjardins@gmail.com> Fri, Feb 11, 2022 at 6:28 PM
To: comdirector@berkleymich.net

Hello,

I am writing to express my support for the proposed marijuana retailer at 2222 W. 11 Mile. I live on 11 Mile on the Huntington Woods side. I think a marijuana retailer is a great addition to the planned/hoped for 11 mile retail/dining corridor in development between HW, Oak Park, and Berkley. I am a parent, a professional, and a medical marijuana patient. I think it's long past time to recognize that marijuana is responsibly used by many adults who are contributing members of our communities. I support the approval of this business in this location.

Warmly,
Cate Desjardins

--
Cate Desjardins, LMSW-C
www.catedesjardins.com
Phone: 248.880.3047

My pronouns are they/them. Please share your pronouns with me.

CONFIDENTIALITY NOTICE: Electronic Mail is not secure, may not be read every day, and should not be used for urgent or sensitive issues.


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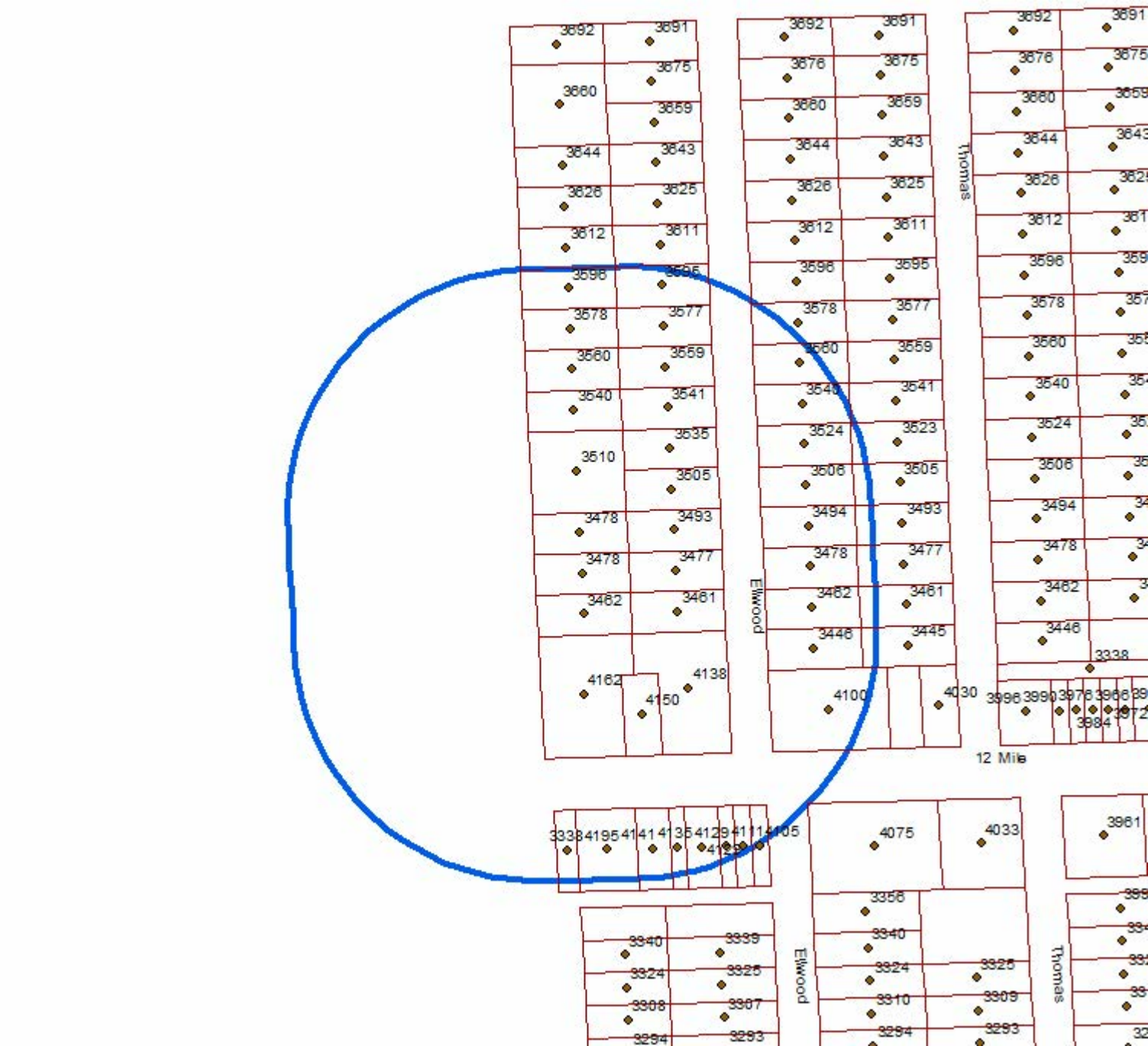
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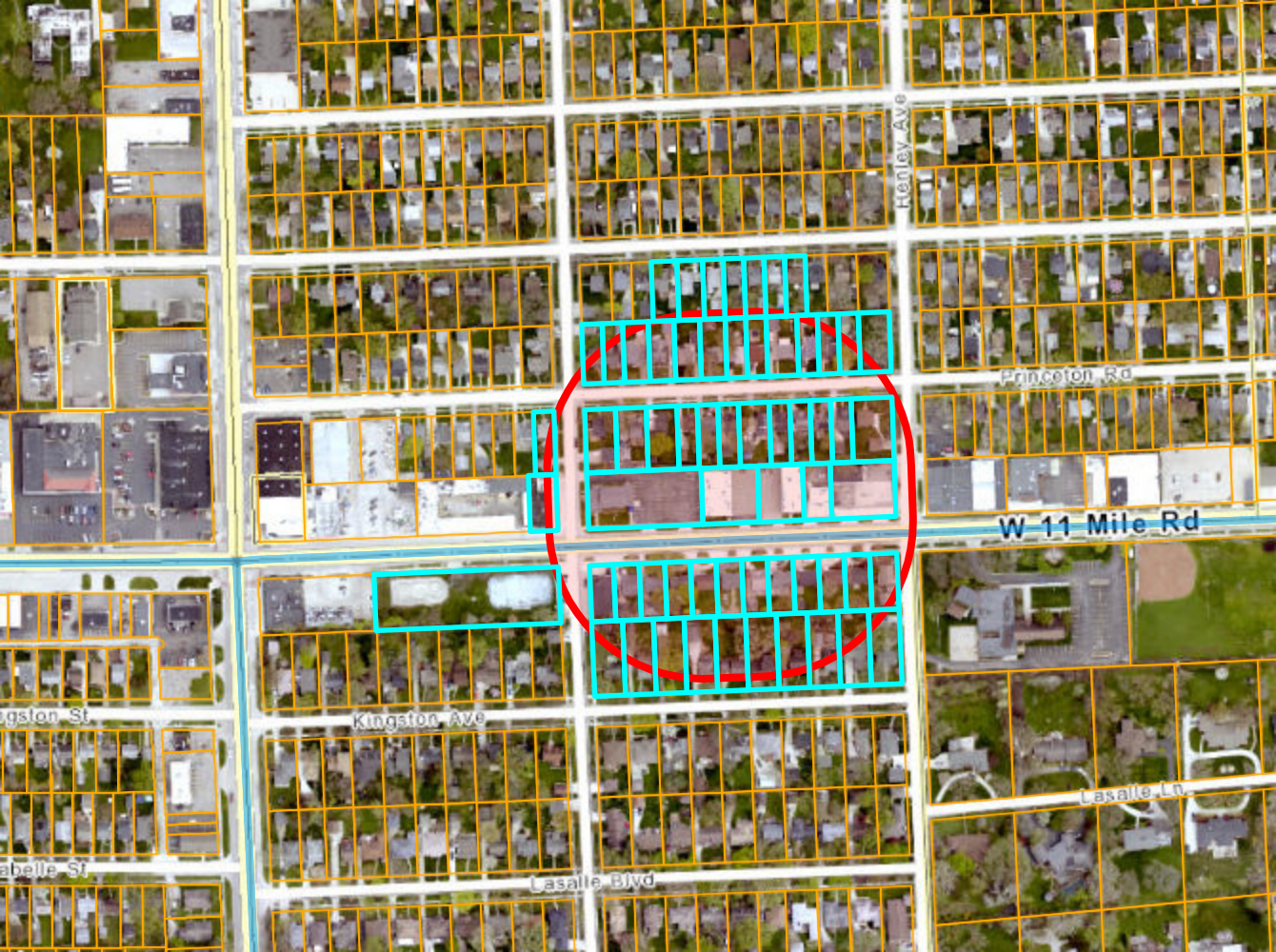
Henley Ave
Princeton Rd
W 11 Mile Rd
Kingston Ave
Lasalle Blvd
Lasalle Ln

THE CITY OF BERKLEY
Building Department
3338 Coolidge, Berkley, Michigan 48072
(248) 658-3320

NOTICE OF PUBLIC MEETING
BERKLEY PLANNING COMMISSION

NOTICE IS HEREBY GIVEN, in accordance with Section 138-399 of the Berkley City Code, that there will be a meeting of the Berkley Planning Commission to be held at the City of Berkley in the Council Chambers, 3338 Coolidge Hwy, Berkley Michigan, on **Tuesday, February 22, 2022** at 7:07pm, or as near thereto as the matter may be reached.

APPLICATION PSP-03-21

T. Fought & Associates, on behalf of North Green Trust, 3462-3478 Greenfield Rd, Parcels #25-07-355-013, #25-07-355-014, #25-07-355-015, is requesting site plan approval for the development of a new six-unit office building in the Greenfield District.

Complete application information is available for review at www.berkleymich.org/urbanplanning.

Comments regarding the request may be made in person on the night of the meeting or may be made in writing. All written comments must be submitted to the Building Department or email to comdirector@berkleymich.net before 5:00p.m on the date of the Planning Commission meeting.

You can watch the meeting: https://www.berkleymich.org/livestream/index.php

MEGAN MASSON-MINOCK
INTERIM COMMUNITY DEVELOPMENT DIRECTOR

SOILS INVESTIGATION
UNDERGROUND DETENTION SYSTEM
2222 11 MILE ROAD
BERKLEY, MICHIGAN

OPERATION GROW, LLC
P.O. BOX 725202
BERKLEY, MICHIGAN 48072

NOVEMBER 30, 2020
BY
McDOWELL & ASSOCIATES

McDowell & Associates

Geotechnical, Environmental & Hydrogeological Services • Materials Testing & Inspection

21355 Hatcher Avenue, Ferndale, MI 48220
Phone: (248) 399-2066 • Fax: (248) 399-2157
www.mcdowasc.com

November 30, 2020

Operation Grow, LLC
P.O. Box 725202
Berkley, Michigan 48072

Job No. 20-309

Attention: Mr. Daniel Amori

Subject: Soils Investigation
Underground Detention System
2222 11 Mile Road
Berkley, Michigan

Gentlemen:

In accordance with your request, we have performed a Soils Investigation at the subject project.

Two (2) Soil Test Borings, designated as 1 and 2, were performed at the locations you required. The approximate locations of the borings are shown on the Soil Boring Location Plan which accompanies this report. The borings were advanced to a depth of ten feet six inches (10'6") below the existing pavement surface at the boring locations.

Soil descriptions, groundwater observations, and the results of field and laboratory tests are to be found on the accompanying Logs of Soil Borings.

The borings encountered two and three-quarters-inch (2¾") and four-inch (4") thick asphalt pavement, two feet eleven inches (2'11") and three feet seven and one-quarter inches (3'7¼") of fill soils consisting of buried topsoil, dark brown and black gravelly sand to sand and gravel, and firm to stiff brown and dark brown silty clay, nine inches (9") and one foot three inches (1'3") of medium compact to compact brown fine sand, followed by firm to extremely stiff brown to variegated silty clay which were found throughout the remainder of the borings. Buried topsoil was found in Boring 2 between the depths of two feet ten inches (2'10") and three feet three inches (3'3").

Soil descriptions and depths shown on the boring logs are approximate indications of change from one soil type to another and are not intended to represent an area of exact geological change or stratification. Also, the site shows signs of modification which could indicate fill and soil conditions different from those encountered at the boring locations.

Water was encountered in Boring 2 at a depth of four feet (4') below the existing pavement surface. Boring 2 was found dry upon completion of the drilling operation. No water was

encountered in Boring 1. It should be noted that short-term groundwater observations may not provide a reliable indication of the depth of the water table. In clay soils this is due to the slow rate of infiltration of water into the borehole as well as the potential for water to become trapped in overlying layers of granular soils during periods of heavy rainfall. It should be expected that groundwater level fluctuations may occur on a seasonal basis and that seams of water-bearing sands or silts could be found within the various clay strata at the site.

Standard Penetration Tests were made during sampling using an automatic hammer. These tests indicate that the fill soils have fair densities while the underlying native soils have fair to very good strengths and densities. Tests taken at a depth of two feet six inches (2'6") gave results of 5 and 7 blows per foot. The five-foot (5') test values were 5 and 7 blows per foot. At depths of seven feet six inches (7'6") and ten feet (10'), test values ranged from 17 to 33 blows per foot.

Falling Head Permeability Tests were performed on Samples 1B and 2B. Coefficient of permeability (k) values of 1.9×10^{-6} and 2.8×10^{-4} centimeters per second (cm/sec) were obtained. The lower value was obtained on the native clay soils in Boring 1 and the higher value was obtained on the native sand soils in Boring 2.

It is understood that an underground storm water retention system is planned to be installed in the vicinity of the borings. The system will consist of tanks and pipes which may slowly release storm water into the site granular soils. No specific details of the system have been provided to us. It is assumed that the tanks and pipes will transmit relatively light loads to the supporting soils.

Based on the project information provided and the results of field and laboratory tests, it is believed that the tanks and pipes could be supported on properly installed and compacted bedding material and/or engineered fill which will need to extend through any existing fill soil and rest on native non-organic granular or cohesive soils at the site. The tanks and pipes will need to be designed to resist uplift buoyancy forces when these structures are empty if they are installed below the site groundwater level.

If the tanks are supported on conventional spread, strip or mat-type footings, then these footings should be constructed at or below a minimum frost penetration depth of three feet six inches (3'6") below finished grade. All footings should extend through non-engineered fill soils, soils containing a significant amount of organic substances, or excessively weak soils. All strip footings should be continuously reinforced in order to minimize the noticeable effects of differential settlement.

Footings constructed at the boring locations could be proportioned for the design soil pressures listed in the table below provided this results in the footings bearing on natural non-organic soils.

Boring	Depth			Soil Pressure (psf)
1	4'0"	to	6'0"	2,000
2	3'6"	to	6'0"	2,500

Water was encountered in Boring 2 at a depth of four feet (4'). Depending upon the depth of the footings relative to the existing ground surface and the actual conditions at the time of construction, it may be necessary to depress the water table in this location to allow for footings to be constructed. Water seepage in sands above clay in the vicinity of this boring should be manageable with construction pumping and sumps. If large volumes of water or saturated granular soils are encountered, then special dewatering techniques may be required. Extreme care must be exercised during any dewatering operation if any nearby structures or utilities are sensitive to settlement. Care must be taken to minimize the removal of soil fines during any pumping operation.

The borings encountered a relatively thin sand layer below depths of three feet three inches (3'3") and three feet ten inches (3'10"). It appears the sands have an infiltration rate of about $2.8x10^{-4}$ cm/sec or 0.4" per hour. We would suspect this granular material would have a very limited assimilation capacity for any storm water release from the retention system. The underlying clay soils should be considered practically impervious to any water assimilation.

Experience indicates that the actual subsoil conditions at the site could vary from those found at the two (2) test borings made at specific locations. It is, therefore, essential that McDowell & Associates be notified of any variation of soil conditions to determine their effects on the recommendations presented in this report. The evaluations and recommendations presented in this report have been formulated on the basis of reported or assumed data relating to the proposed project. Any significant change in this data in the final design plans should be brought to our attention for review and evaluation with respect to the prevailing subsoil conditions.

It is recommended that the services of McDowell & Associates be engaged to observe the soils in the footing excavations prior to concreting in order to test the soils for the required bearing capacities. Testing should also be performed to check that suitable materials are being used for controlled fills and that they are properly placed and compacted.

If you have any questions or if we can be of any further service, please feel free to call.

Very truly yours,

McDOWELL & ASSOCIATES

Daniel A. Kaniarz, M.S., P.E.

DAK/nm

McDOWELL & ASSOCIATES
Geotechnical, Environmental, & Hydrogeologic Services
21355 Hatcher Avenue • Ferndale, MI 48220
Phone: (248) 399-2066 • Fax: (248) 399-2157

LOG OF SOIL BORING NO. 1

PROJECT Soils Investigation

JOB NO. 20-309

LOCATION Detention System
2222 11 Mile Road
Berkley, Michigan

SURFACE ELEV. _____ **DATE** 11-11-20

Sample & Type	Depth	Legend	SOIL DESCRIPTION	Penetration Blows for 6"	Moisture %	Natural Wt. P.C.F.	Dry Den Wt. P.C.F.	Unc. Comp. Strength PSF.	Str. %
			0'2¾" ASPHALT						
	1		1'0" Moist dark brown to black SAND & GRAVEL with stones and traces of concrete and metal, fill						
A	2			1					
UL			2'2" Firm moist discolored brown silty CLAY with sand and pebbles and moist fine sand lenses, fill	2					
	3			3					
	4		3'10" Firm moist brown silty CLAY with traces of sand and pebbles and topsoil streaks, fill						
B				1					
UL	5		4'7" Medium compact moist brown fine SAND	2	16.4	131			
	6		Firm moist variegated silty CLAY with traces of sand and pebbles	3	k = 1.9x10^{-6} cm/sec				
C	7		6'8"	6					
UL	8		Very stiff moist variegated silty CLAY with sand and pebbles	8	13.5	131			
	9		8'8"	9			*	(2000)	
D				6					
UL	10		Extremely stiff moist brown silty CLAY with sand and pebbles	12					
	11		10'6"	15					
	12								
	13								
	14								
	15								
	16								
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	25								

Notes:

1) Used automatic hammer.

2) Patched boring upon completion with cold patch asphalt.

TYPE OF SAMPLE
D. - DISTURBED
U.L. - UNDIST. LINER
S.T. - SHELBY TUBE
S.S. - SPLIT SPOON
R.C. - ROCK CORE
( ) - PENETROMETER

REMARKS: *Calibrated Penetrometer

Standard Penetration Test - Driving 2" OD Sampler 1' With 140# Hammer Falling 30": Count Made at 6" Intervals

GROUND WATER OBSERVATIONS

G.W. ENCOUNTERED AT . FT. INS.
G.W. ENCOUNTERED AT FT. INS.
G.W. AFTER COMPLETION FT. None INS.
G.W. AFTER HRS. FT. INS.
G.W. VOLUMES

McDOWELL & ASSOCIATES
Geotechnical, Environmental, & Hydrogeologic Services
21355 Hatcher Avenue • Ferndale, MI 48220
Phone: (248) 399-2066 • Fax: (248) 399-2157

LOG OF SOIL BORING NO. 2

PROJECT Soils Investigation

JOB NO. 20-309

LOCATION Detention System
2222 11 Mile Road
Berkley, Michigan

SURFACE ELEV. _____ **DATE** 11-11-20

Sample & Type	Depth	Legend	SOIL DESCRIPTION	Penetration Blows for 6"	Moisture %	Natural Wt. P.C.F.	Dry Den Wt. P.C.F.	Unc. Comp. Strength PSF.	Str. %
			0'4" ASPHALT						
	1		1'0" Moist dark brown gravelly SAND, fill						
			Stiff moist discolored brown silty CLAY with sand and pebbles, trace of brick and moist fine sand lenses, fill						
A	2			2					
UL				2					
	3		2'10" Compact moist dark brown to black TOPSOIL,	5					
			3'3" fill						
	4		Compact moist to wet brown fine SAND with						
B			trace of gravel	4					
UL	5		4'6"	3	19.1	124			
			Stiff moist variegated silty CLAY with sand and pebbles	4	k = 2.8×10^{-4} cm/sec				
	6		6'0"						
C	7			7					
UL				10	13.9	134			
	8		Extremely stiff moist brown silty CLAY with traces of sand and pebbles	15			*	(9000+)	
	9								
D			9'6"	7					
UL	10		Extremely stiff moist brown silty CLAY with sand and pebbles	14					
			10'6"	19					
	11								
	12								
	13								
	14								
	15		Notes:						
	16		1) Used automatic hammer.						
	17		2) Patched boring upon completion with cold patch asphalt.						
	18								
	19								
	20								
	21								
	22								
	23								
	24								
	25								

TYPE OF SAMPLE
D. - DISTURBED
U.L. - UNDIST. LINER
S.T. - SHELBY TUBE
S.S. - SPLIT SPOON
R.C. - ROCK CORE
( ) - PENETROMETER

REMARKS: *Calibrated Penetrometer

Standard Penetration Test - Driving 2" OD Sampler 1' With 140# Hammer Falling 30": Count Made at 6" Intervals

GROUND WATER OBSERVATIONS

G.W. ENCOUNTERED AT	4	FT.	0	INS.
G.W. ENCOUNTERED AT		FT.		INS.
G.W. AFTER COMPLETION	Dry	FT.		INS.
G.W. AFTER HRS.		FT.		INS.
G.W. VOLUMES		Light		

No Scale

N



Soil Boring Location Plan

#20-309