

166 Lincolnway Valparaiso, IN 46383 (219) 462-1161 Valpo.us

MEETING AGENDA

Valparaiso Plan Commission Tuesday, April 2, 2024, 5:30 PM Valparaiso City Hall – Council Chambers

- 1. Pledge of Allegiance
- 2. Roll Call
- 3. Adoption of Meeting Minutes March 5, 2024
- 4. Old Business

PP24-001, a petition filed by Greg Lorig of DVG Team, Inc.,on behalf of MJF Development, Inc. The petitioner requests approval of a primary plat for a four (4) lot commercial subdivision to be known as MJF Subdivision located on about 5.74 acres at the northeast corner of the intersection of Marsh St and US-30/Morthland Dr.

- 5. New Business None.
- 6. Staff Items
- 7. Adjournment

Matt Evans, President Beth Shrader, Planning Director

Next Meeting: Tuesday, May 7, 2024

Interested persons can view public meetings live on the City of Valparaiso website, www.valpo.us or participate in the webinar by visiting bit.ly/ValpoPC2024. Requests for alternate formats please contact Planning Department at planningdepartment@valpo.us or (219) 462-1161.



March 22, 2024

Ms. Beth Shrader Director of Planning & Transit City of Valparaiso, Indiana 166 Lincolnway, Valparaiso, IN 46383

SUBJECT: MJF Subdivision – Primary Plat Re-Submittal

Dear Ms. Shrader,

On behalf of MJF Development, Inc., DVG Team is resubmitting the primary plat for the MJF Subdivision for approval consideration at the April 2, 2024 Plan Commission Meeting. Verbal comments were provided by the Plan Commission, Planning Department, and Engineering Department at the March 5, 2024 Plan Commission meeting and written comments were received from you via emails before and after the meeting. Comments received to date are summarized below along with our responses.

1. The Developer needs to present an acceptable phasing plan before the Primary Plat is approved.

Response: See attached phasing plan.

2. A retaining wall easement should be provided on the parcels located east of the wall along the east edge of the site. Differentiate between construction and maintenance easement for the retaining wall.

Response: Retaining wall easements are provided along the west and south edge of Lot 4 of the Subdivision. An appurtenant retaining wall easement is provided on the plat for the adjoining property to the east. The easements provided are reserved for the installation, location, upkeep, repair and maintenance of the retaining wall as noted on the Deed of Dedication on the Primary Plat.

3. The private lift station area should be included in the utility/drainage easement.

Response: *The private lift station area is included in said easement.*

4. The City has provided comments regarding the Deed of Dedication language.

Response: DVG Team's surveyor and the Developer's attorney (Bill Ferngren) have reviewed and incorporated comments into the revised Primary Plat.

5. Could hatching be used to designate some key easement areas, for instance, the driveway locations? Pertinent labels will also be helpful.



Response: The revised Primary Plat has been updated to include additional hatching and labels for clarity.

6. The current easements all but eliminate the opportunity for monument signs along US-30 and Marsh. Sign easements within the utility/drainage easement are a possible solution, but we are open to other ideas.

Response: The revised Primary Plat includes specific sign easements outside of the utility and drainage easements for monument signs for Lots 1, 2, and 3 along US 30. Site distance has been checked and exhibit included with this re-submittal.

- 7. We have not gotten a response from INDOT on their ability to take stormwater from the project at US 30. INDOT hydraulics has provided 2 comments as part of the R/W permit review:
 - a. The driveway culvert must be hydraulically designed using HY-8, Version 7.2. Please note that the minimum driveway culvert size is 15" diameter per IDM, Chapter 203.
 - b. Please provide spread calculations for the proposed turnouts along US 30. Spread requirements can be found in Chapter 203 of the IDM.

Response: DVG Team has confirmed via the requested HY-8 calculations that a 15" diameter driveway culvert will be adequate. Subdivision Engineering Plans will be updated accordingly and re-submitted to INDOT for review so the R/W Permit can be approved. If plan revisions occur, they will be submitted to the City for their records.

DVG Team will provide spread calculations as requested by INDOT and update curb turnout locations if necessary. Subdivision Engineering Plans will be updated accordingly and resubmitted to INDOT for review so the R/W Permit can be approved. If plan revisions occur, they will be submitted to the City for their records.

As discussed with you and the Engineering Director, INDOT did not provide any comments objecting to the detention pond stormwater release into their R/W. DVG Team will provide a copy of the approved R/W Permit once secured.

8. Address potential impacts that the construction of the large retaining wall proposed along the east side of the property will have on the foundation of the building located at 957 West Street. This includes possible soil disturbance that would impact lateral support of foundation.

Response: As discussed with you and the Engineering Director, DVG Team is working closely with the geotechnical engineer and Redi-Rock's 3rd Party Engineer who will be doing the detailed design and drawings for the retaining wall. The 3rd Party Engineer has just gotten under Contract to complete this work. At this time, a gravity block wall is anticipated along the north side of the property paralleling West Street. The wall on the east side of the property is anticipated to be a combination of a gravity block retaining wall and a permanent shoring (i.e. sheet pile) wall with a Redi-Rock block façade. DVG Team will provide final



engineered drawings and concurrence from the Geotechnical Engineer as soon as available. Should revisions be necessary to the Subdivision Engineering Plans, DVG Team will provide updated plans to the City for review and/or their records.

9. The retaining wall will require separate permits. In addition to the engineered plans required for the wall, evaluation by qualified engineer of the impact the retaining wall will have on the foundation at 957 Wall Street will be required. This includes that foundation complies with 2014 Indiana Building Code, Chapter 18.

Response: See response to comment #8.

10. The City has provided comments on Attorney Ferngren's Declaration of Reciprocal Easements legal document.

Response: See attached revised declaration of reciprocal easements document.

11. The City has requested that the sidewalk along Marsh Street be constructed as part of Phase 1 or 2 construction (concurrent with subdivision engineering work or hotel construction).

Response: The phasing plan and subdivision engineering plans have been updated accordingly showing the sidewalk and crosswalk installed in Phase 1. .

Thank you for the City's continued feedback and cooperation with us on this important project. Should you have any questions prior to the April 2, 2024 Plan Commission meeting, please do not hesitate to contact me at 219.546.3853 or Bill Ferngren at 219.771.0155.

Respectfully,

DVG Team, Inc.

Greg Lorig, PE.

Manager of Commercial Site Development

glorig@dvgteam.com

DEED OF DEDICATION:

THE UNDERSIGNED, MJF DEVELOPMENT, INC, OWNER OF THE REAL ESTATE SHOWN AND DESCRIBED HEREIN, DOES HEREBY CERTIFY THAT IT HAS LAID OFF, PLATTED, AND SUBDIVIDED SAID REAL ESTATE IN ACCORDANCE WITH THE ATTACHED PLAT. THIS SUBDIVISION SHALL BE KNOWN AND DESIGNATED

THERE ARE STRIPS OF GROUND OF VARIOUS WIDTHS AND OTHER AREAS SHOWN ON THIS PLAT AND LABELED AS EASEMENTS FOR THE BENEFIT OF THE PROPERTY COMPRISING THE SUBDIVISION FOR VARIOUS PURPOSES ASSOCIATED THEREWITH OVER, ACROSS, UNDER AND THROUGH THE SUBDIVISION, INCLUDING THE INSTALLATION, MAINTENANCE, REPAIR AND REPLACEMENT OF PUBLIC AND PRIVATE UTILITIES, DRAINAGE, INGRESS/EGRESS, RETAINING WALL AND SIGNAGE AND INFRASTRUCTURE WORKS, POLES, WIRES, PIPES, MAINS, SWALES, CHANNELS, BASINS, OVERFLOWS CONDUITS, CABLES, COMPONENTS AND FACILITIES RELATED TO THE EASEMENTS AND THEIR RESPECTIVE USE AND PURPOSE. THE EASEMENTS HEREIN SHALL INCLUDE THE RIGHT OF INGRESS AND INGRESS AND ALL OTHER NECESSARY OR INCIDENTAL USES OF THE PROPERTY TO INSTALL, INSPECT, MAINTAIN, REPAIR AND REPLACE THE FOREGOING ITEMS AND RELATED IMPROVEMENTS AND OTHER FACILITIES RELATED THERETO FOR THE FULL ENJOYMENT OF THE RIGHTS GRANTED HEREIN, PROVIDED, HOWEVER, THAT SHOULD ANY PARTY UNDERTAKE SUCH INSTALLATION, INSPECTION, MAINTENANCE, REPAIR OR REPLACEMENT, THE PARTY UNDERTAKING THE SAME SHALL RESTORE, AS NEAR AS PRACTICAL, THE PROPERTY, INCLUDING SURFACE AND SUBSURFACE, TO THE SAME CONDITION AS EXISTED PRIOR TO THE ENTRY AND DISTURBANCE THEREOF. NO PERMANENT OR OTHER STRUCTURES ARE TO BE ERECTED OR MAINTAINED UPON SAID EASEMENTS THAT ARE INCONSISTENT WITH THE USE AND ENJOYMENT OF SUCH EASEMENTS. OWNERS OF LOTS IN THIS SUBDIVISION SHALL TAKE THEIR TITLES SUBJECT TO TERMS, CONDITIONS OF PLAT APPROVAL IMPOSED BY THE CITY OF VALPARAISO, EASEMENTS DEPICTED AND OTHERWISE DESCRIBED AFFECTING THE PROPERTY AND THE RIGHTS OF OTHERS ARISING FROM THE SAME INCLUDING. PUBLIC AND PRIVATE UTILITIES AND TO THE RIGHTS OF THE OWNERS OF OTHER LOTS IN

THERE ARE AREAS DESIGNATED ON THIS PLAT AS "RETAINING WALL EASEMENT" OR "APPURTENANT RETAINING WALL EASEMENT" THAT ARE HEREBY RESERVED FOR THE INSTALLATION, MAINTENANCE, REPAIR AND REPLACEMENT OF A RETAINING WALL AND RELATED IMPROVEMENTS FOR THE

RECIPROCAL INGRESS/EGRESS AND PARKING EASEMENTS ARE HEREBY GRANTED TO EACH PROPERTY OWNER AND THEIR RESPECTIVE TENANTS, EMPLOYEES, AGENTS, CONTRACTORS, CUSTOMERS, AND INVITEES ACCESS OVER AND ACROSS PARKING AREAS, DRIVEWAYS, ROADWAYS AND WALKWAYS LOCATED ON LOTS 1, 2, AND 3 IN THIS SUBDIVISION.

SIGN EASEMENTS ARE RESERVED ON EACH LOT AS SHOWN ON THE PLAT FOR THE PRINCIPAL PURPOSE OF INSTALLATION, MAINTENANCE, REPAIR AND REPLACEMENT OF SIGNAGE AND RELATED IMPROVEMENTS AND ASSOCIATED LANDSCAPING FOR EACH RESPECTIVE PARCEL PROVIDED HOWEVER THAT OTHER UTILITIES AND OTHER USES THE AREAS IS PROHIBITED SO LONG AS THE SAME DO NOT INTERFERE WITH THE PRINCIPAL USE OF SAID EASEMENT.

THERE ARE STRIPS OF GROUND LABELED AS "NO ACCESS STRIP" WHICH PROHIBIT VEHICULAR ACCESS TO OR FROM THE SUBDIVISION THROUGH THOSE AREAS TO ANY PROPERTY LYING OUTSIDE THE SUBDIVISION OR ANY PUBLIC RIGHT-OF-WAY.

THE SANITARY SEWER SYSTEM, STORM WATER DRAINAGE SYSTEM, RETAINING WALL AND OTHER IMPROVEMENTS TO THE PROPERTY WITHIN THE SUBDIVISION AND/OR WHICH ARE MADE A PART OF THE SUBDIVISION BY AND THROUGH THIS PLAT SHALL BE PRIVATE. AND THE OPERATION AND MAINTENANCE OF THE SAME, SHALL BE UNDERTAKEN BY THE OWNERS OF PROPERTY IN THE SUBDIVISION; PROVIDED, HOWEVER, THAT IN THE EVENT OF AN EMERGENCY OR OTHER EXIGENT CIRCUMSTANCE WHERE PROPERTY DAMAGE OR PERSONAL INJURY MAY RESULT FROM THE OWNERS' FAILURE TO OPERATE, MAINTAIN OR REPAIR SAID FACILITIES, THE CITY OF VALPARAISO AND ITS RELATED AGENTS SHALL HAVE THE RIGHT, BUT NOT THE OBLIGATION, TO ENTER UPON ANY PROPERTY IN THE SUBDIVISION TO MAKE ANY NECESSARY REPAIRS, REPLACEMENTS OR OTHERWISE TAKE CORRECTIVE ACTION TO REMEDY THE SITUATION AND THEREAFTER RECOVER ALL ADMINISTRATIVE, LEGAL, ENGINEERING AND CONSTRUCTION COSTS INCURRED FOR SAID WORK AND ACTION TAKEN FROM THE OWNERS OF PROPERTY IN THE SUBDIVISION WHICH MAY INCLUDE A SPECIAL ASSESSMENT LEVIED AGAINST THE PROPERTY BENEFITTED FROM SUCH WORK OR

ALL PERSONS ARE ON NOTICE THAT IN ADDITION TO THE FOREGOING, OWNERSHIP, USE AND DEVELOPMENT OF ANY PROPERTY LYING WITHIN THE SUBDIVISION IS SUBJECT TO THE TERMS AND CONDITIONS OF A DECLARATION OF RECIPROCAL EASEMENTS FOR THE SUBDIVISION RECORDED IN THE OFFICE OF THE RECORDER OF PORTER COUNTY, INDIANA, INCLUDING ANY AMENDMENTS OR SUPPLEMENTS THERETO.

SIGNATURE	ITS:
(PRINTED NAME)	
STATE OF	
COUNTY OF) SS:)
APPEARED	JBLIC, IN AND FOR THE SAID COUNTY AND STATE, PERSONAND ACKNOWLEDGED THE EXECUTION OF TIDAY OF
NOTARY PUBLIC	
PRINTED NAME	
	:

UNDER THE AUTHORITY OF ORDINANCE 18, 1974, AS AMENDED, THE PLAT WAS EXAMINED BY THE BOARD OF PUBLIC WORKS AND SAFETY OF THE CITY OF VALPARAISO AND WAS APPROVED

THIS	DAY OF	2024.

ATTEST:

MEMBER

PRINTED NAME
PRINTED NAME
PRINTED NAME
-

PRINTED NAME

PRIMARY PLAT MJF SUBDIVISION

AN ADDITION TO THE CITY OF VALPARAISO, PORTER COUNTY, INDIANA

PARCEL DESCRIPTION:

A PARCEL OF LAND LYING IN THE NORTHEAST QUARTER OF SECTION 26. TOWNSHIP 35 NORTH, RANGE 6 WEST OF THE SECOND PRINCIPAL MERIDIAN, IN THE CITY OF VALPARAISO, PORTER COUNTY, INDIANA, SAID PARCEL ALSO BEING PART OF BLOCKS 56, 57 AND 62 IN COUNCIL'S ADDITION OF 1883 TO THE CITY OF VALPARAISO, INDIANA AS PER PLAT THEREOF RECORDED IN MISCELLANEOUS RECORD "E", PAGE 534 IN THE OFFICE OF THE RECORDER OF SAID COUNTY, LYING NORTH OF THE NORTH RIGHT-OF-WAY LINE OF U.S. HIGHWAY NO. 30 - MORTHLAND DRIVE, SAID PARCEL DESCRIBED AS FOLLOWS: COMMENCING AT THE NORTHWEST CORNER OF SAID BLOCK 62, THENCE NORTH 89 DEGREES 58 MINUTES 10 SECONDS EAST (BASIS OF BEARINGS IS ASSUMED), 83.50 FEET ALONG THE NORTH LINE OF SAID BLOCK 62 AND THE SOUTH RIGHT-OF-WAY LINE OF WEST STREET TO THE EAST LINE OF A HIGHWAY GRANT (MARSH STREET) AS RECORDED IN BOOK 3. PAGE 47 IN SAID RECORDER'S OFFICE AND THE POINT OF BEGINNING: THENCF CONTINUING NORTH 89 DEGREES 58 MINUTES 10 SECONDS EAST, 841.76 FEET ALONG THE NORTH LINES OF SAID BLOCKS 62, 57 AND 56 TO THE EAST LINE OF THE WEST 100 FEET OF BLOCK 56 IN SAID COUNCIL'S ADDITION; THENCE SOUTH 00 DEGREES 02 MINUTES 51 SECONDS EAST, 306.63 FEET ALONG LAST SAID EAST LINE TO SAID NORTH RIGHT-OF-WAY LINE BEING A NON-TANGENT CURVE CONCAVE NORTH. HAVING A RADIUS OF 7.540.00 FEET. AND A CHORD THAT BEARS NORTH 87 DEGREES 37 MINUTES 51 SECONDS WEST, 842.88 FEET; THENCE WEST 843.32 FEET ALONG SAID RIGHT-OF-WAY LINE TO SAID EAST LINE OF HIGHWAY GRANT (MARSH STREET); THENCE NORTH 00 DEGREES 01 MINUTES 49 SECONDS EAST, 271.34 FEET ALONG LAST SAID EAST LINE TO THE POINT OF BEGINNING, CONTAINING 5.74 ACRES MORE OR LESS.

APPURTENANT RETAINING WALL EASEMENT DESCRIPTION:

A 15 FOOT WIDE STRIP OF LAND LYING IN THE NORTHEAST QUARTER OF SECTION 26, TOWNSHIP 35 NORTH, RANGE 6 WEST OF THE SECOND PRINCIPAL MERIDIAN, IN THE CITY OF VALPARAISO, PORTER COUNTY, INDIANA, SAID PARCEL ALSO BEING PART OF BLOCK 56 IN COUNCIL'S ADDITION OF 1883 TO THE CITY OF VALPARAISO. INDIANA AS PER PLAT THEREOF RECORDED IN MISCELLANEOUS RECORD "E". PAGE 534 IN THE OFFICE OF THE RECORDER OF SAID COUNTY, LYING NORTH OF THE NORTH RIGHT-OF-WAY LINE OF U.S. HIGHWAY NO. 30 – MORTHLAND DRIVE, SAID STRIP BEING THE EAST 15 FEET OF THE WEST 115 FEET OF THE SOUTH 200.32 FEET LYING NORTH OF SAID NORTH RIGHT-OF-WAY LINE, SAID STRIP CONTAINING 0.07 ACRES MORE OR LESS.

LEGEND

NO ACCESS LINE SIGN EASEMENT AREA

IPF- IRON PIPE FOUND IRS DVG- 5/8" REBAR SET WITH PLASTIC CAP STAMPED DVG TEAM INC FORM NO. 0120"

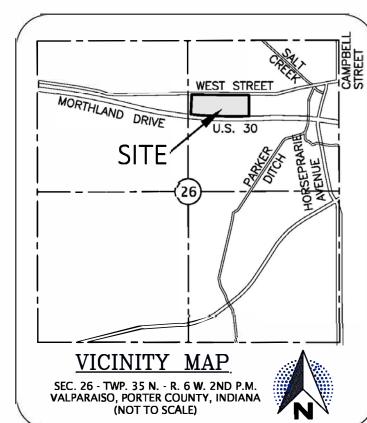
TAX ID. NO. 64-09-26-202-008.000-004 OWNER: MJF DEVELOPMENT, INC. QUIT CLAIM DEED DOC. NO. 2014-003404 REC. FEBRUARY 25, 2014

PARCEL INFORMATION:

TAX ID. 64-09-26-202-009.000-004 OWNER: MJF DEVELOPMENT, INC QUITCLAIM DEED DOC. NO. 2023-016735 REC. OCTOBER 5, 2023

TAX ID. 64-09-26-202-010.000-004 OWNER: MJF DEVELOPMENT, INC. QUIT CLAIM DEED DOC. NO. 2014-003450 REC. FEBRUARY 25, 2014

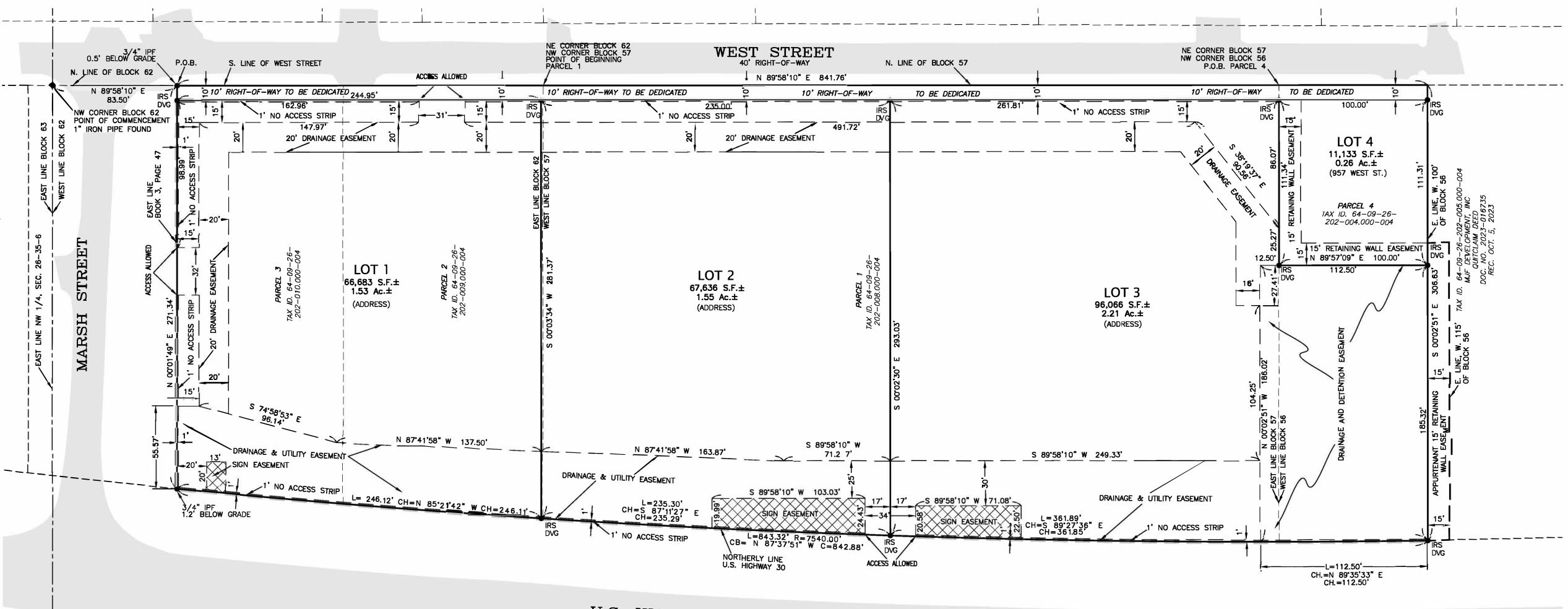
TAX ID. 64-09-26-202-004.000-004 OWNER: MJF DEVELOPMENT, INC QUITCLAIM DEED DOC. NO. 2023-016735 REC. OCTOBER 5, 2023



MJF DEVELOPMENT, INC VALPARAISO, IN 46383

DVG TEAM, INC. 1151 WEST US HIGHWAY 30 1155 TROUTWINE ROAD CROWN POINT, INDIANA 46307 219-662-7710

PARCEL AREA 249,935 SQ. FT.± 5.74 ACRES±



U.S. HIGHWAY 30 / MORTHLAND DRIVE

200' LIMITED ACCESS RIGHT OF WAY (VARIABLE WIDTH PAVEMENT)

EAST BOUND LANES

FROM 0.5 ACRES TO 0.28 ACRES (ONLY LOT 4)

PLAN COMMISSION CERTIFICATE:

UNDER AUTHORITY PROVIDED BY INDIANA CODE 36-7-4, ET SEQ., ENACTED BY THE GENERAL ASSEMBLY OF THE STATE OF INDIANA AND ORDINANCE ADOPTED BY THE COMMON COUNCIL OF THE CITY OF VALPARAISO, THIS PLAT WAS GIVEN APPROVAL BY THE CITY AS FOLLOWS:

APPROVED BY THE VALPARAISO PLAN COMMISSION (OR PLAT COMMITTEE) AT A REGULAR MEETING HELD ON ________, 2024.

VALPARAISO PLAN COMMISSION (OR PLAT COMMITTEE)

EXECUTIVE DIRECTOR

PRESIDENT PRINTED NAME

PRINTED NAME

1. THE REAL ESTATE DESCRIBED IN THIS PLAT IS SUBJECT TO A CERTAIN DECLARATION OF EASEMENTS, COVENANTS AND RESTRICTIONS RECORDED AS DOCUMENT NO. IN THE OFFICE OF THE PORTER COUNTY, INDIANA RECORDER ("DECLARATION"). OWNERSHIP, USE AND OCCUPANCY OF ALL PROPERTY AND THE LOTS ON THIS PLAT IS EXPRESSLY SUBJECT TO THE TERMS AND CONDITIONS SET FORTH IN THE DECLARATION, INCLUDING ALL AMENDMENTS AND SUPPLEMENTS THERETO.

2. PER THE BOARD OF ZONING APPEALS MEETING MINUTES ON OCTOBER 18, 2023, THE REAL ESTATE DESCRIBED IN THIS PLAT IS SUBJECT TO THE FOLLOWING APPROVED VARIANCES: a. SECTION 11.305(K)(1) TO REDUCE MINIMUM LOT SIZE FOR A COMMERCIALLY ZONED LOT IN THE US 30 (MORTHLAND DRIVE) SIGNATURE OVERLAY DISTRICT

b. TABLE 9.401 AND SECTION 11.305(N)(2) TO VARY FROM FRONTAGE STREET OR REVERSE FRONTAGE STREET REQUIREMENTS AND ACCESS ROADS FOR COMMERCIAL ZONED PARCELS REQUIREMENT WHICH DESCRIBE INTENTION OF NO DIRECT ACCESS ON US 30 (MORTHLAND DRIVE). PROPOSED PROJECT: SHARED ACCESS DRIVE PROPOSED IN LOCATION SHOWN ON PLAN)

c. VARIANCES RELATED TO NEW CONSTRUCTION HOTEL (LOT 3): 1. TABLE 3.301(B) TO EXCEED 0.353 NONRESIDENTIAL GROSS MAXIMUM FLOOR AREA RATIO (GROSS FAR) (PROPOSED PROJECT: 0.404 GROSS FAR) 2. SECTION 11.502(B)(L) (BUILDING DIMENSIONS) TO REDUCE REQUIRED BUILDING OFFSETS FROM 6 FEET FOR WALLS 80 FEET LONG OR GREATER AND 2 FEET FOR WALLS LESS THAN 80 FEET (PROPOSED PROJECT: BUILDING OFFSETS PROVIDED RANGING IN DIMENSION OF 2.1 FEET TO 5.0 FEET PER PLAN

3. SECTION 11.503 (ARCHITECTURAL FEATURES): SUBSECTION (A)(L) (PRIMARY FACADES) TO REDUCE REQUIREMENT OF ARCHITECTURAL FEATURES SPACED NO GREATER THAN 12 FEET IN THE HORIZONTAL DISTANCE TO THAT SHOWN IN PLANS; SUBSECTION (B)(L) (OTHER FACADES FACING STREETS) TO REDUCE REQUIREMENT OF ARCHITECTURAL FEATURES TO BE PROVIDED ALONG 40% OF THE FACADE THAT IS CLOSEST TO THE CORNER WITH THE PRIMARY FACADE AND SPACED AT INTERVALS NO GREATER THAN 12 FEET IN HORIZONTAL DISTANCE TO THAT SHOWN IN PLANS; SUBSECTION (C) (BLANK WALLS) TO REDUCE REQUIREMENT NOT ALLOWING AREAS OF BLANK WALL GREATER THAN 16 FEET IN THE HORIZONTAL DISTANCE TO THAT SHOWN IN PLANS. 4. SECTION 11.506(A) (REQUIRED TRANSPARENCY ALONG STREET FRONTAGES) TO REDUCE PRIMARY FACADE TRANSPARENCY FROM 40% TO THAT SHOWN IN PLANS AND TO REDUCE OTHER STREET FRONTAGE TRANSPARENCY FROM 30% TO THAT SHOWN IN PLANS. 5. SECTION 11.507 (BUILDING MATERIALS): SUBSECTION (B) (PERMITTED MATERIALS) TO ALLOW EIFS, TERRA NEO STONE AND LAMINATE METAL PANELS

NOT ON LIST OF PERMITTED MATERIALS; SUBSECTION (C)(L) (LIMITED MATERIALS) TO ALLOW EIFS PROPOSED ON THE AT GRADE LEVEL AND ABOVE,

PROPOSED TO EXCEED 30% OF THE FACADE AND PROPOSED TO BE IN PEDESTRIAN CONTACT AREAS.

REFERENCE BOUNDARY INFORMATION TO AN ALTA/NSPS LAND TITLE SURVEY OF THE SUBJECT PARCEL BY DVG TEAM, INC., DVG PROJECT NUMBER 22-0851, RECORDED AS DOCUMENT NUMBER 2023-012957 ON AUGUST 15, 2023 IN THE OFFICE OF THE RECORDER OF PORTER COUNTY, INDIANA. THERE ARE NO SUBSTANTIAL DIFFERENCES WITH THE BOUNDARY OF SAID SURVEY AND THIS PLAT.

REDACTION STATEMENT:

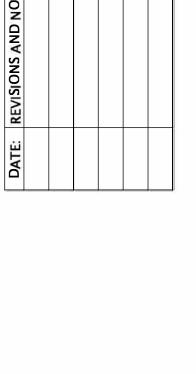
"I AFFIRM, UNDER PENALTIES FOR PERJURY, THAT I HAVE TAKEN REASONABLE CARE TO REDACT EACH SOCIAL SECURITY NUMBER IN THIS DOCUMENT, UNLESS REQUIRED BY LAW."

GLEN E. BOREN

SURVEYORS CERTIFICATE:

I, GLEN E. BOREN, HEREBY CERTIFY THAT I AM A LAND SURVEYOR LICENSED IN COMPLIANCE WITH THE LAWS OF THE STATE OF INDIANA, AND THAT TO THE BEST OF MY KNOWLEDGE, THIS PLAT CONFORMS TO THE REQUIREMENTS OF THE CITY OF VALPARAISO UNIFIED DEVELOPMENT ORDINANCE, AND THE STANDARDS MANUAL; THAT THE MARKERS AND MONUMENTS SHOWN ON THE PLAT ACTUALLY EXIST; AND THAT THEIR LOCATION, SIZE, TYPE AND MATERIAL ARE ACCURATELY SHOWN.

GLEN E. BOREN INDIANA PROFESSIONAL SURVEYOR NO. LS20000006



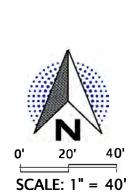
1155 Troutwine Road

Crown Point, IN 46307

P: (219) 662-7710

F: (219) 662-2740

www.dvgteam.com



DEVELOPMENT © COPYRIGHT DVG TEAM, INC

\22-0581 Primary Plat.dwg FILE NO. DATE DRAWN BY 3/22/24 COUNTY, STATE SECTION 26-35-6 PORTER, IN JOB NO.

US 30 & MARSH DEVELOPMENT Subdivision Engineering Plans

VALPARAISO, INDIANA

ISSUED FOR PERMIT - 03/21/2024

LEGEND

RIM ELEVATION PIPE INVERT AND DIRECTION PIPE INVERT AND DIRECTION

TYPE OF FRAME & COVER



Location Map

BENCHMARK

SAW CROSS CUT IN CONCRETE SIDEWALK LOCATED 2.77' NORTH OF 1/2" IDF, SOUTH OF WEST ST. AND EAST ELEVATION = 776.34 (NAVD88)

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

To Submit a Locate Request 24 Hours a Day, Seven Days a Week: Call 811 or 800-382-5544 www.Indiana811.org

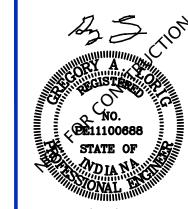
INDEX OF SHEETS

C001	Cover Sheet
C101A	Existing Conditions (Overall)
C101B	Existing Conditions (Subdivision)
C101C	Existing Conditions (West Offsite)
C102	Demolition Plan (Subdivision)
C103A	Site Plan
C103B	Conceptual Subdivision Site Plan
C104	Grading Plan
C105	Overall Utility Plan - Subdivision
C106	Overall Utility Plan - Forcemain
C107-C108	Utility Plan - Forcemain Plan & Profile
C109	Utility Plan - Sanitary Sewer Plan & Profile
C110	Lift Station Site Plan
C111	SWPPP
C201-C205	Construction Details
C301-C304	Stormwater Pollution Prevention Plan Details

PROJECT CONTACTS

					CCHOOL DISTRICT	MUNICIPAL
0	EXISTING DRAINAGE STRUCTURE	700	EXISTING CONTOURS		SCHOOL DISTRICT	MUNICIPAL NALBARAISO BLANKUNG
	EXISTING END SECTION	700	PROPOSED CONTOURS		VALPARAISO COMMUNITY	VALPARAISO PLANNING
0	EXISTING SANITARY STRUCTURE		BOUNDARY LINES		SCHOOLS	166 W. LINCOLNWAY
8	EXISTING FIRE HYDRANT		RIGHT-OF-WAY LINES		3801 CAMPBELL STREET	VALPARAISO, IN 46383
	EXISTING VALVE & BOX		PROPOSED LOT LINES		VALPARAISO, IN 46385	(219) 462-1161
BB	EXISTING B-BOX		UNDERLYING LOT LINE		(219) 531-3000	
0- *	EXISTING STREET LIGHT		EASEMENT LINES			SANITARY SEWER UTILITY
-	POWER POLE		BUILDING LINES		WATER UTILITY	VALPARAISO CITY UTILITIES
SBC MB	SBC PEDESTAL	—x—x—	CHAINLINK FENCE		VALPARAISO CITY UTILITIES	1251 JOLIET ROAD
WR	MAIL BOX		ORNAMENTAL FENCE		205 BILLINGS STREET	VALPARAISO, IN 46383
©	PROPOSED DRAINAGE STRUCTURE	——— OHW ————	OVERHEAD POWER LINES		VALPARAISO, IN 46383	(219) 464-2346
	PROPOSED END SECTION	— T — — —	TELEPHONE ROUTE		(219) 462-6174	
©	PROPOSED SANITARY STRUCTURE	— Е — — —	ELECTRIC ROUTE			CABLE UTILITY
\forall	PROPOSED FIRE HYDRANT	— G — — — —	GAS ROUTE		ELECTRIC & GAS UTILITY	COMCAST
	PROPOSED VALVE & VAULT		EXISTING WATER		NIPSCO	16 W. 84th DRIVE
⊚	PROPOSED VALVE & BOX	-)>	EXISTING STORM		801 E. 86th AVENUE	MERRILLVILLE, IN 46410
⁸⁸	PROPOSED B-BOX	->	EXISTING SANITARY		MERRILLVILLE, IN 46410	(219) 738-2780
<u>0−</u> ₩	PROPOSED STREET LIGHT	— w —	PROPOSED WATER		(800) 464-7726	· ,
<u> </u>	DIRECTION OF FLOW	—>>	PROPOSED STORM		,	TELECOM UTILITY
10		—> —	PROPOSED SANITARY		DEVELOPER/OWNER	FRONTIER COMMUNICATIONS
$\langle \rangle$	OVERLAND FLOOD ROUTE				MJF DEVELOPMENT, LLC	2401 CHICAGO STREET
	PROPOSED TOP RETAINING WALL ELEVATION				1151 W. US HWY 30	VALPARAISO, IN 46383
∕ 000.00 B/W	PROPOSED BOTTOM OF RETAINING ELEVATION				VALPARAISO, IN, 46383	(219) 531-2118
000.00					MARKFORSZT@HOTMAIL.COM	(213) 331 2110
• 000.00					With the Charles and the transfer of the Control of	
000.00	PROPOSED SURFACE ELEVATION					
•						
	PROPOSED					
		ABEL/DIAMETER	FH #1	FIRE HYDRANT & NUMBER LABEL		
STORM	1022Z1, 1020M1 TYPE OF	FRAME & COVER WA		GROUND ELEVATION		

V.B FOR VALVE BOX AND V.V FOR VALVE IN VAULT SIZE OF GATE VALVE OR TAPPING SLEEVE



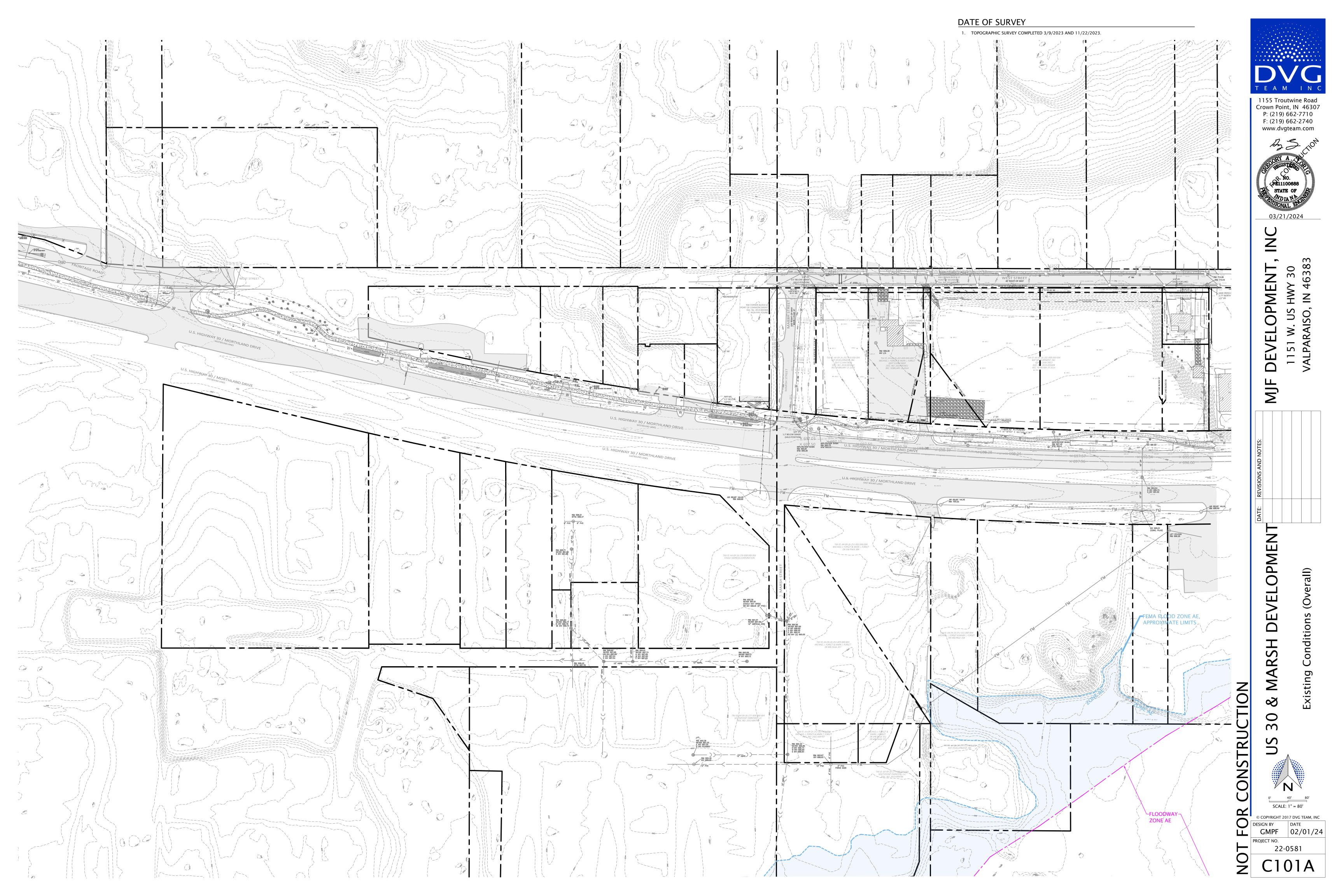
DEVELOPMEN

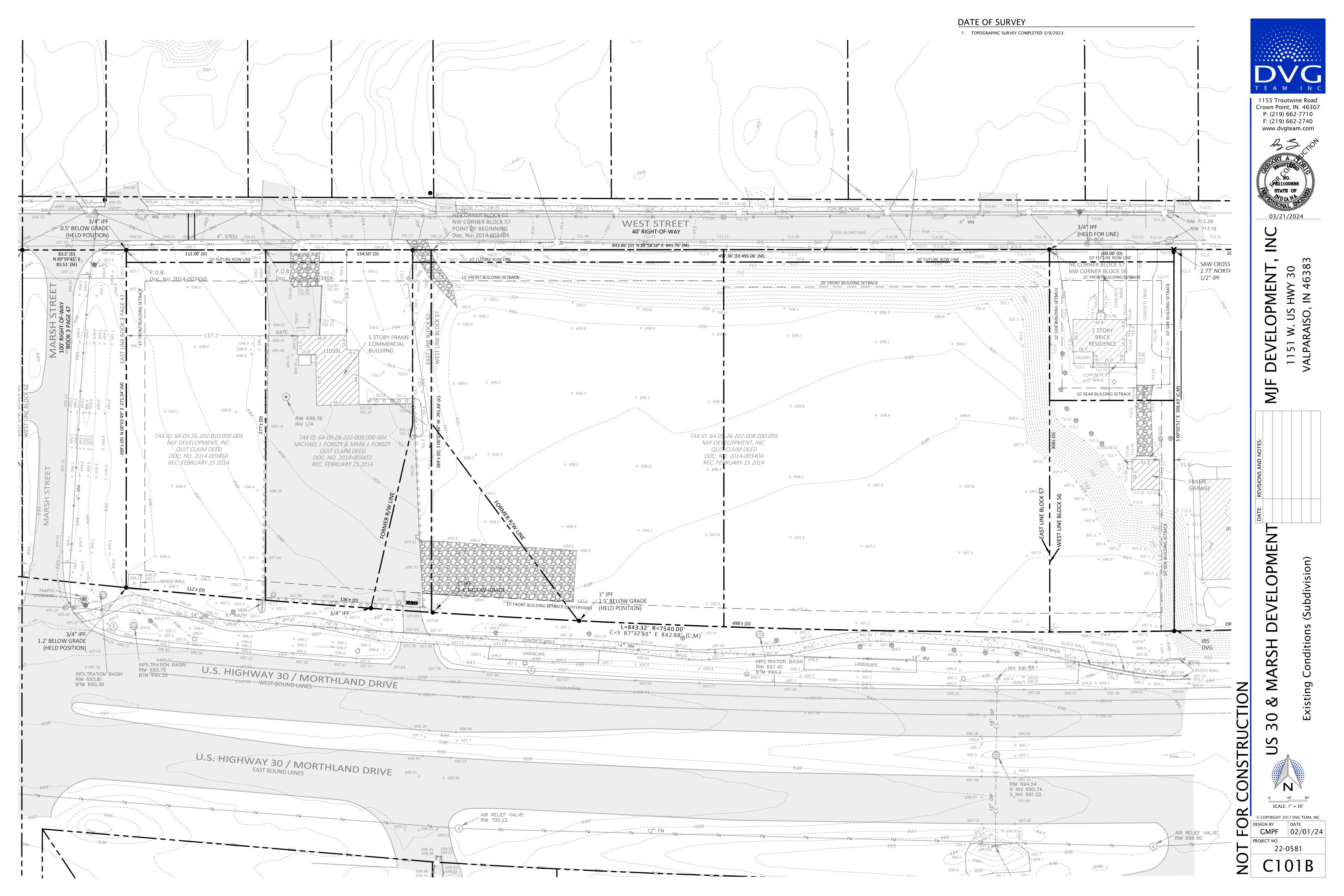
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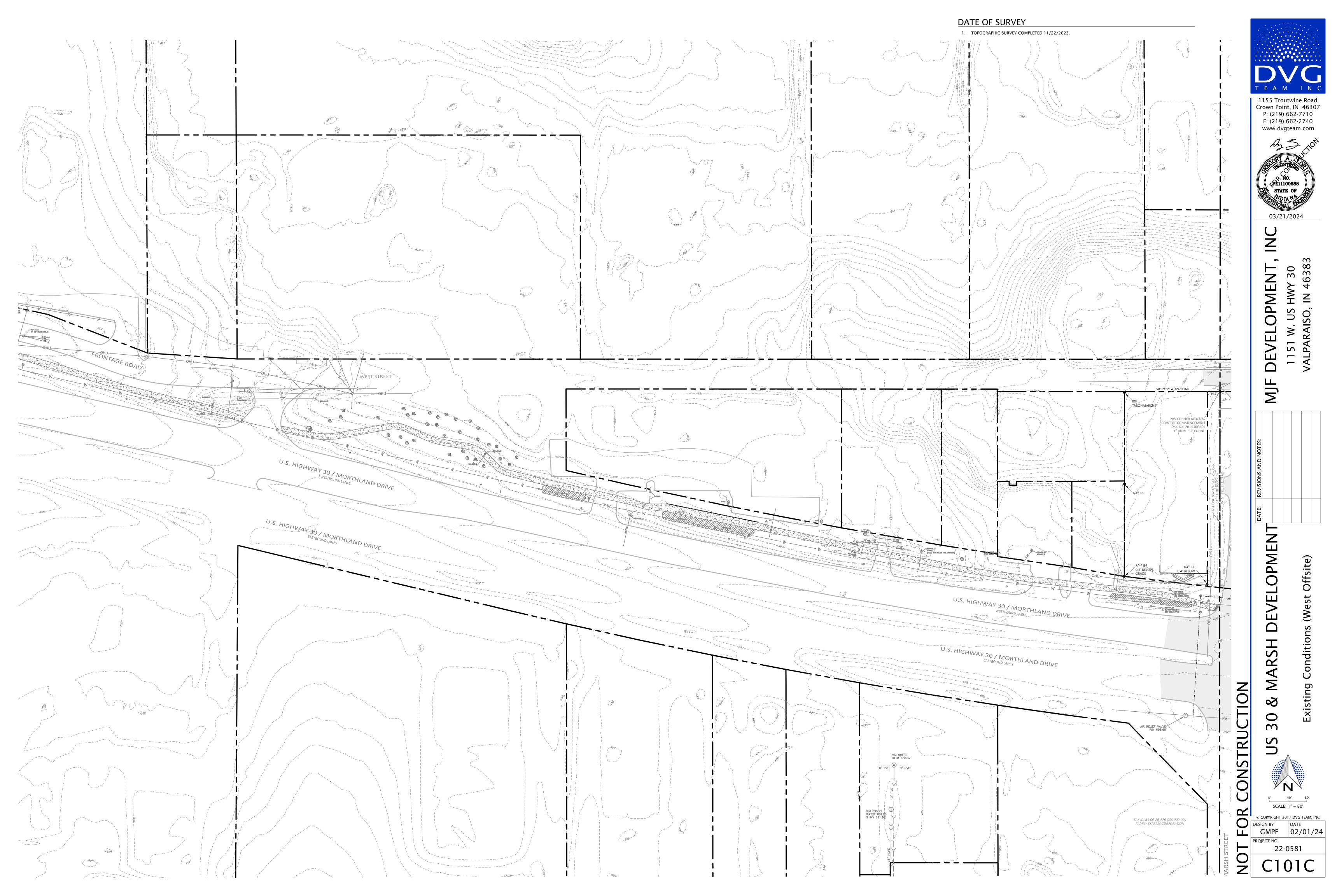
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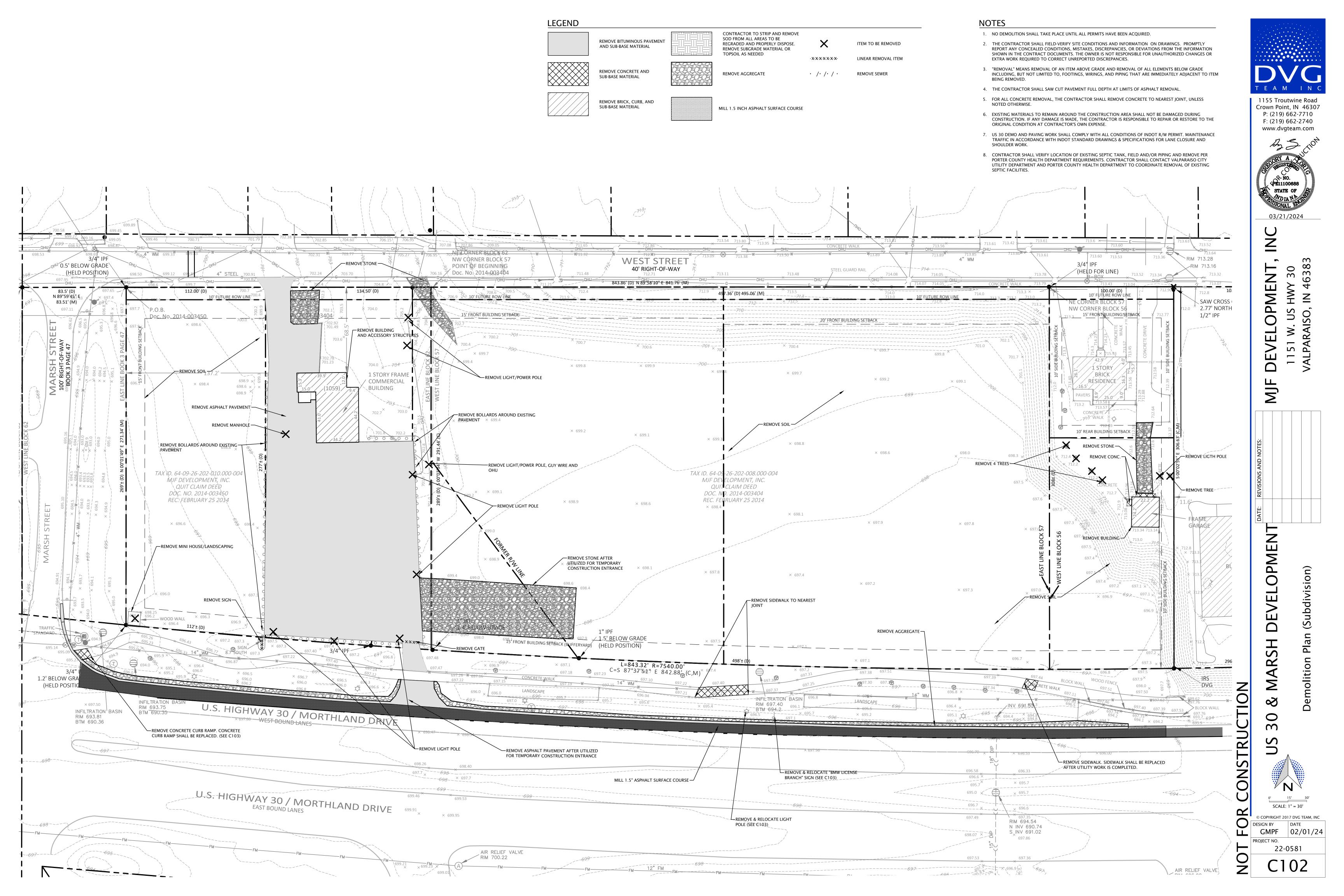
GMPF 02/01/24

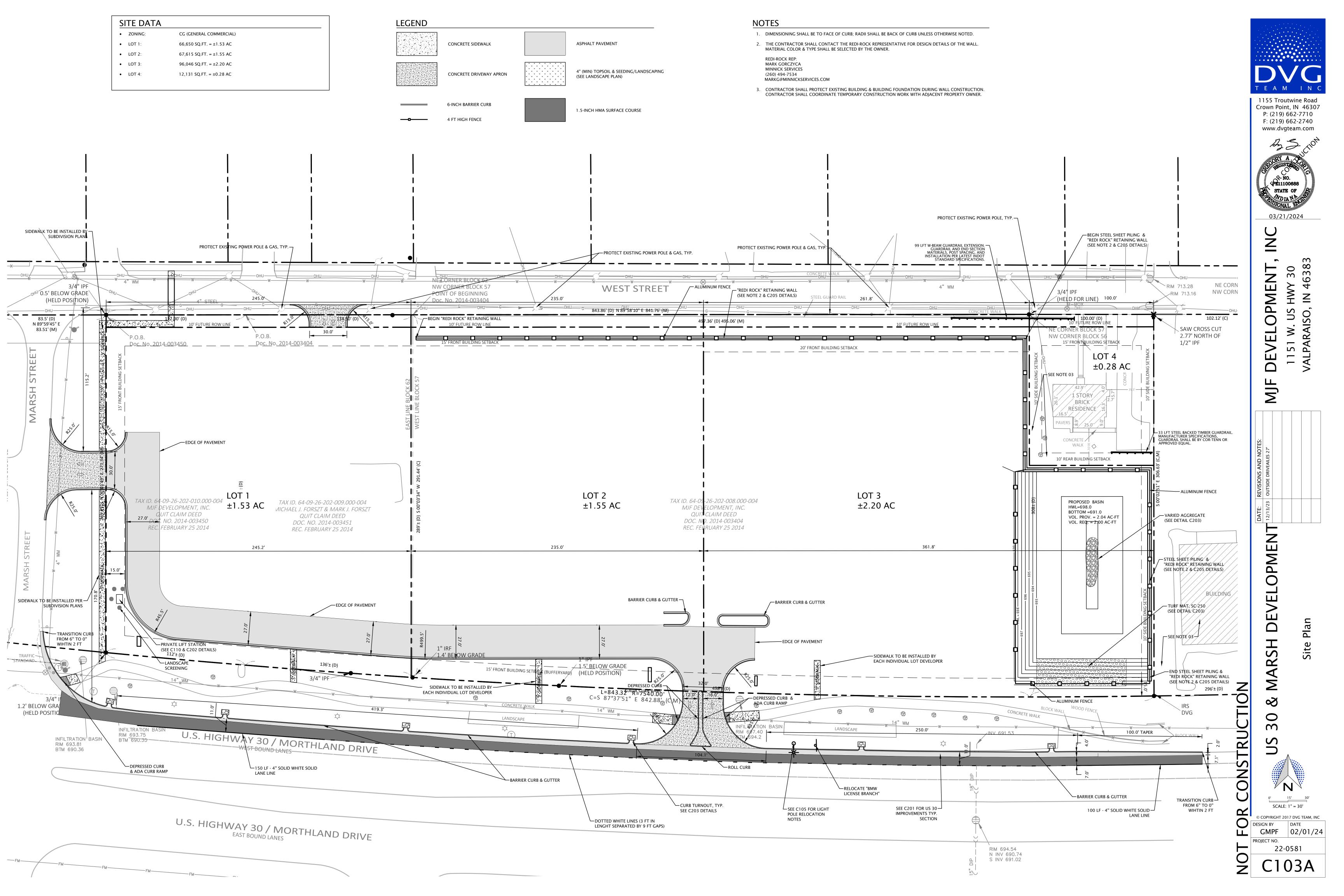
22-0581 C00

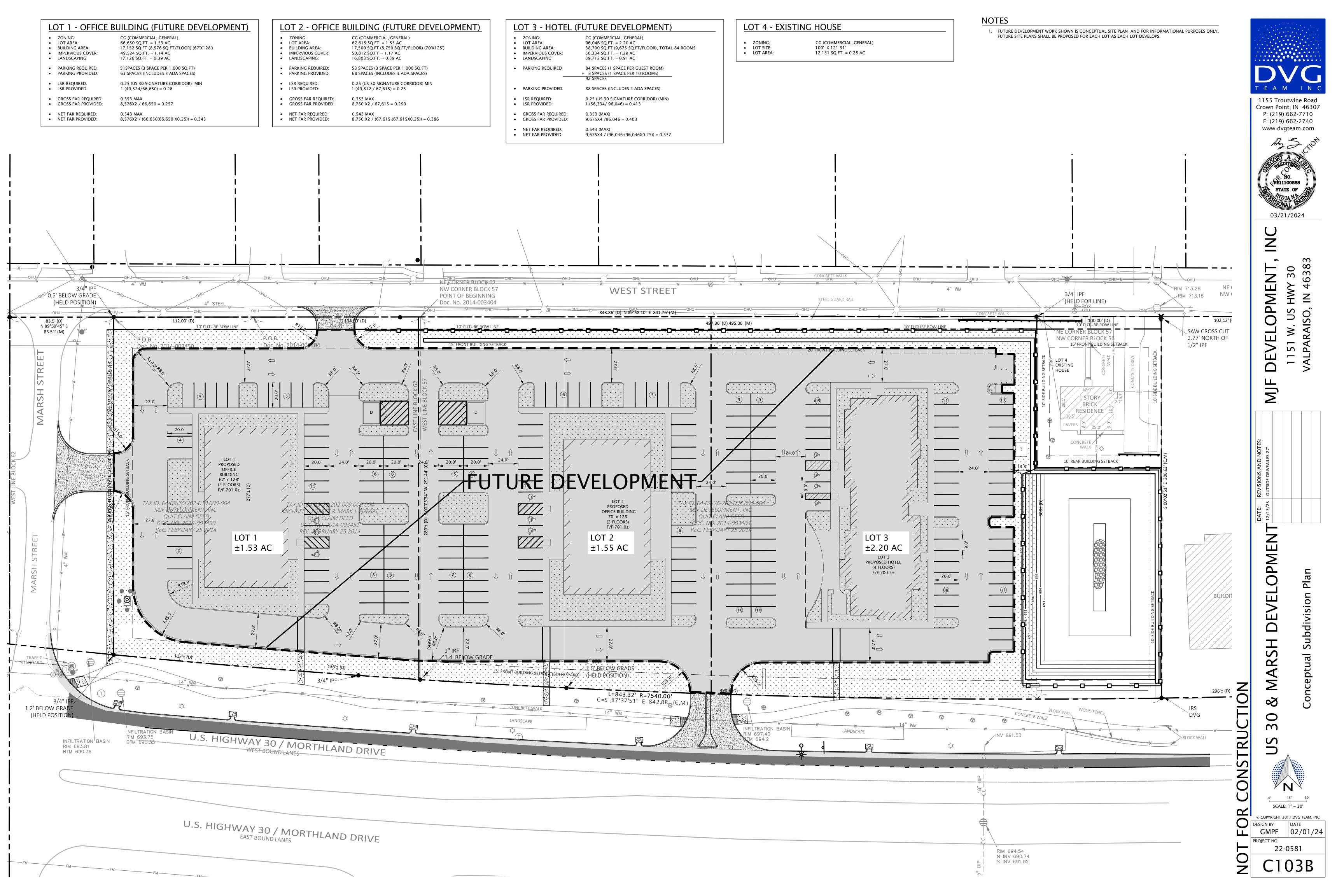


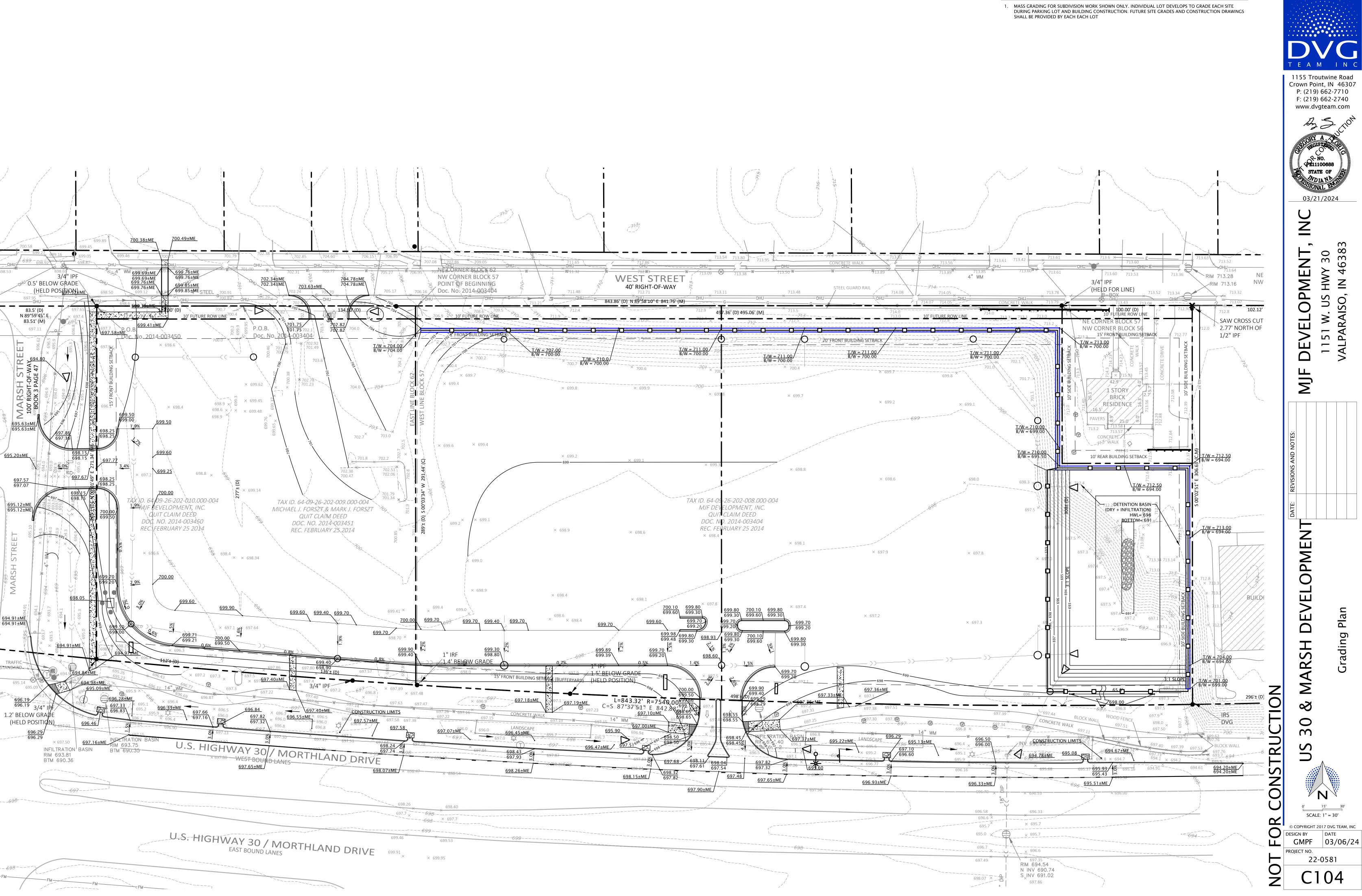


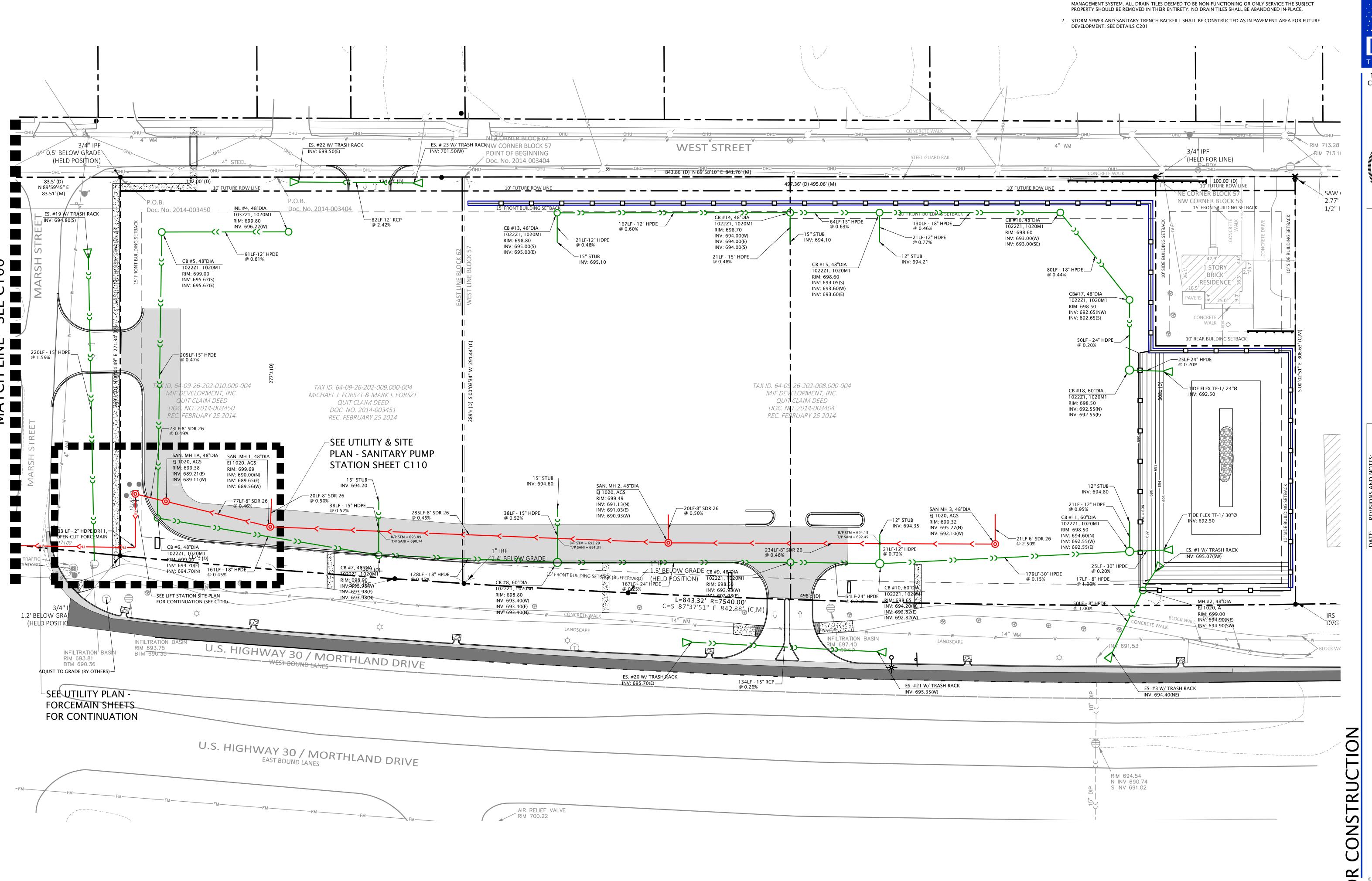












NOTES

ALL DRAIN TILES THAT ACTIVELY SERVICE OFF-SITE AREAS SHOULD BE TIED INTO THE PROPOSED STORMWATER

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STATE OF

03/21/2024

VELOPMEN

OPMEN

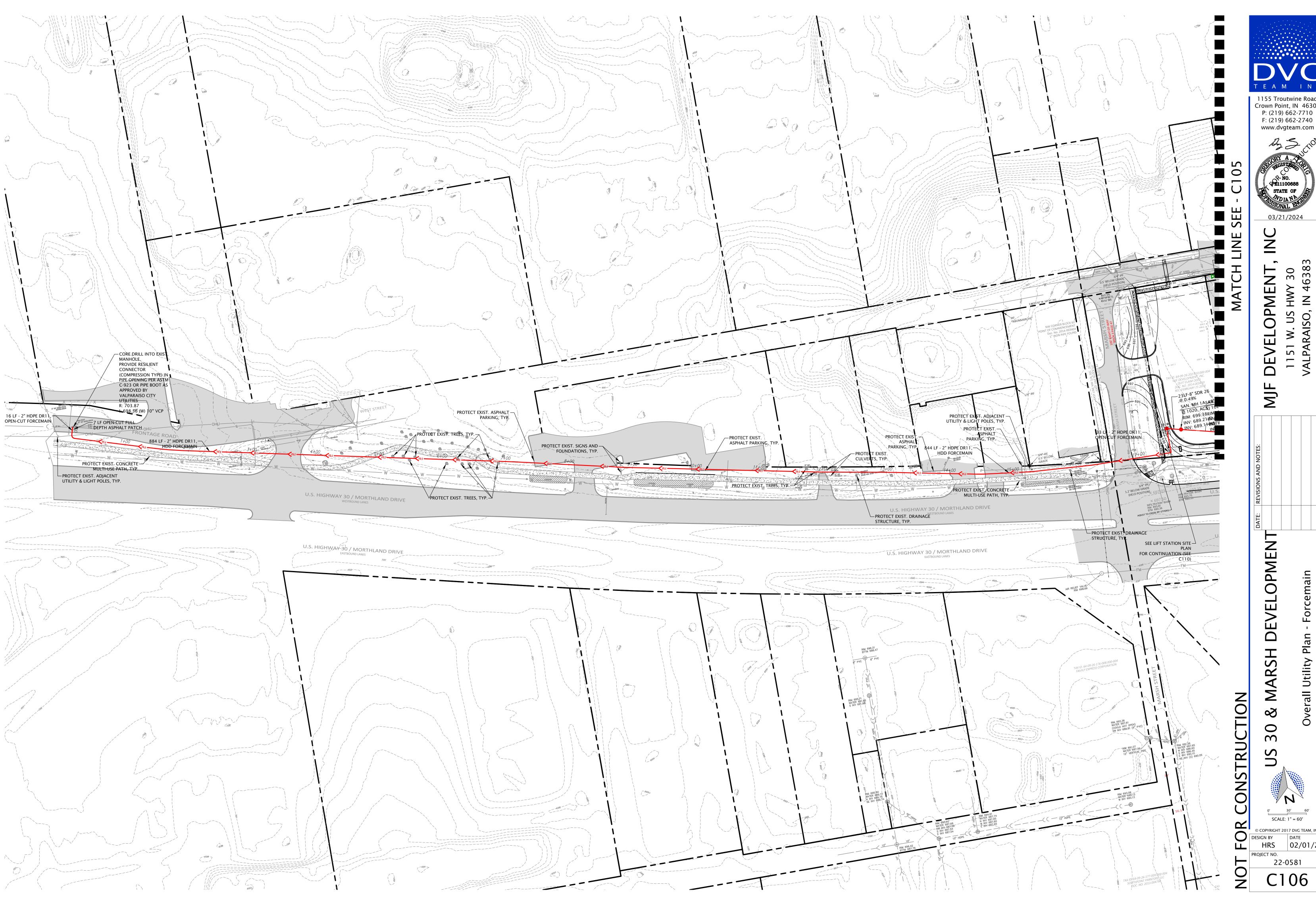
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SCALE: 1" = 30'

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C105



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OPMENT

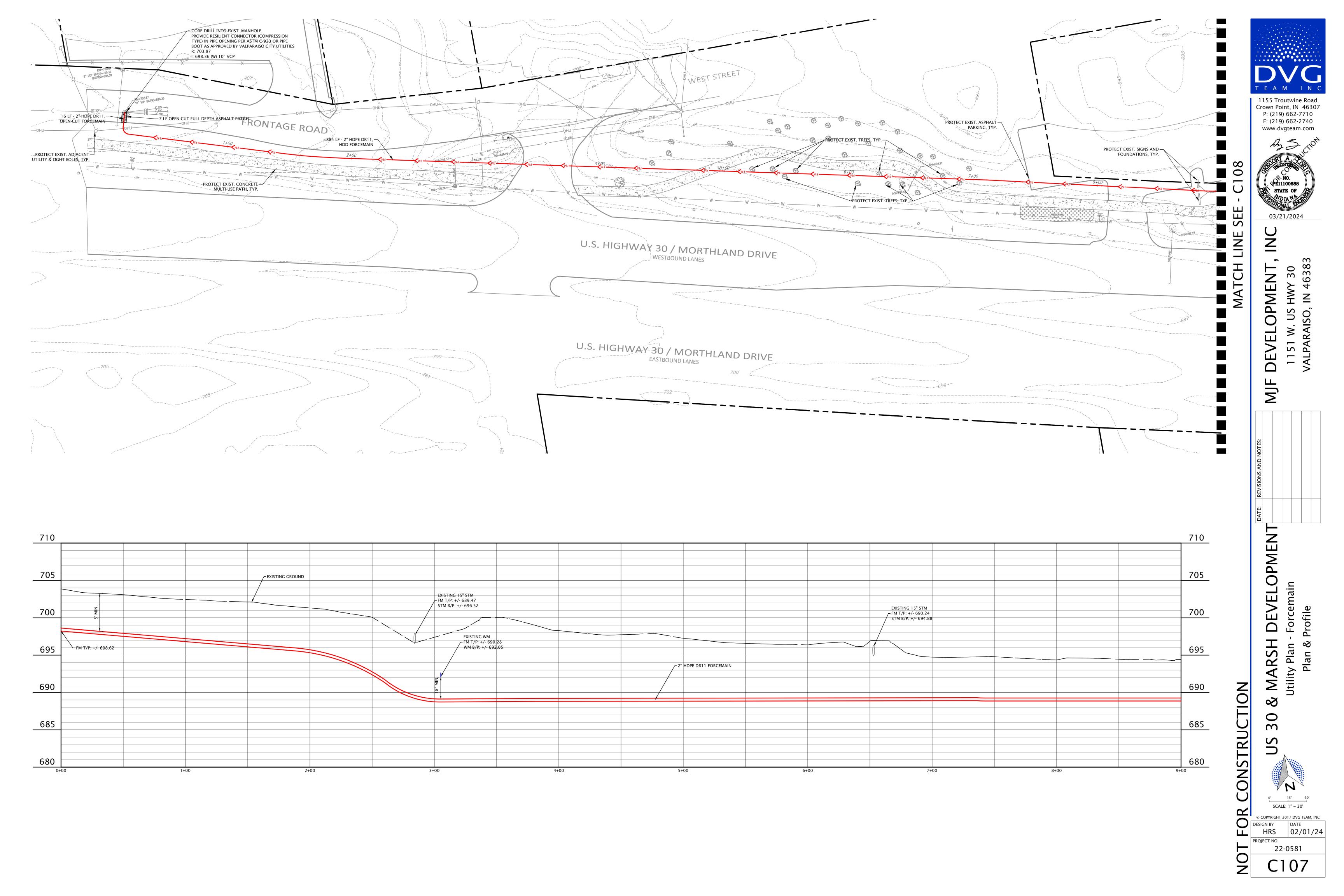
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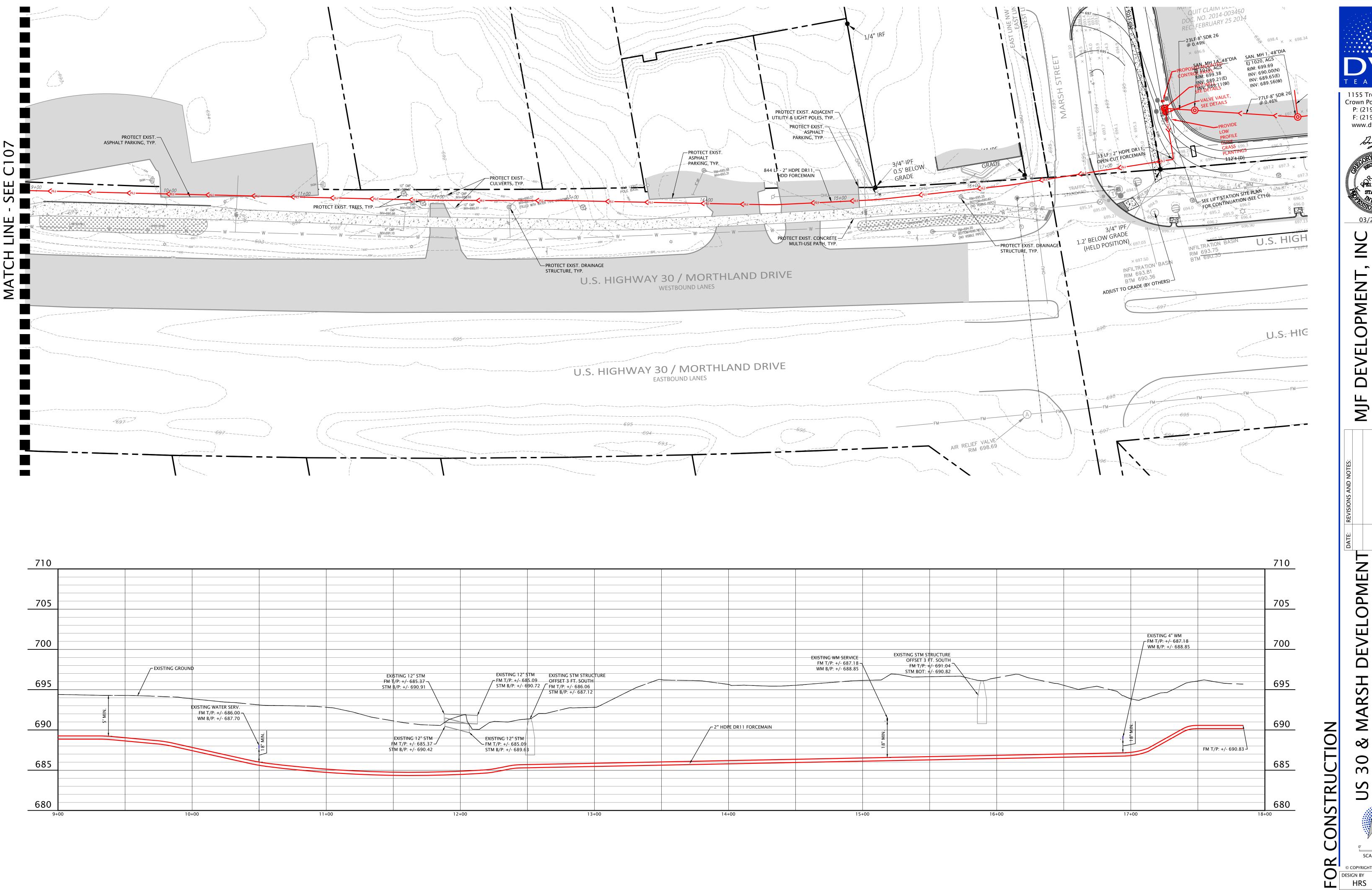
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C106





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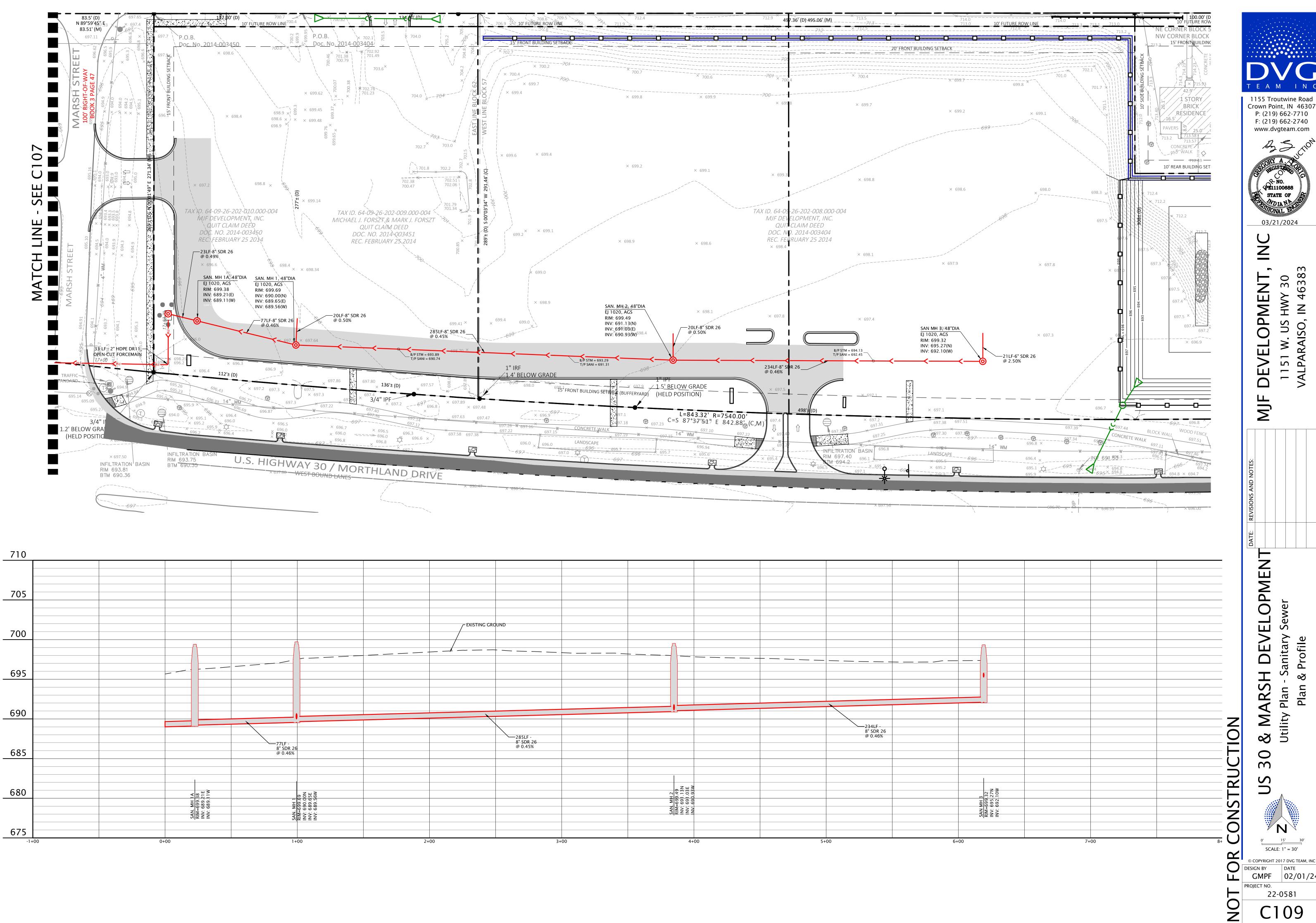
MJF

DEVELOPMENT ARSH

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MARSH DEVELOPMENT 30

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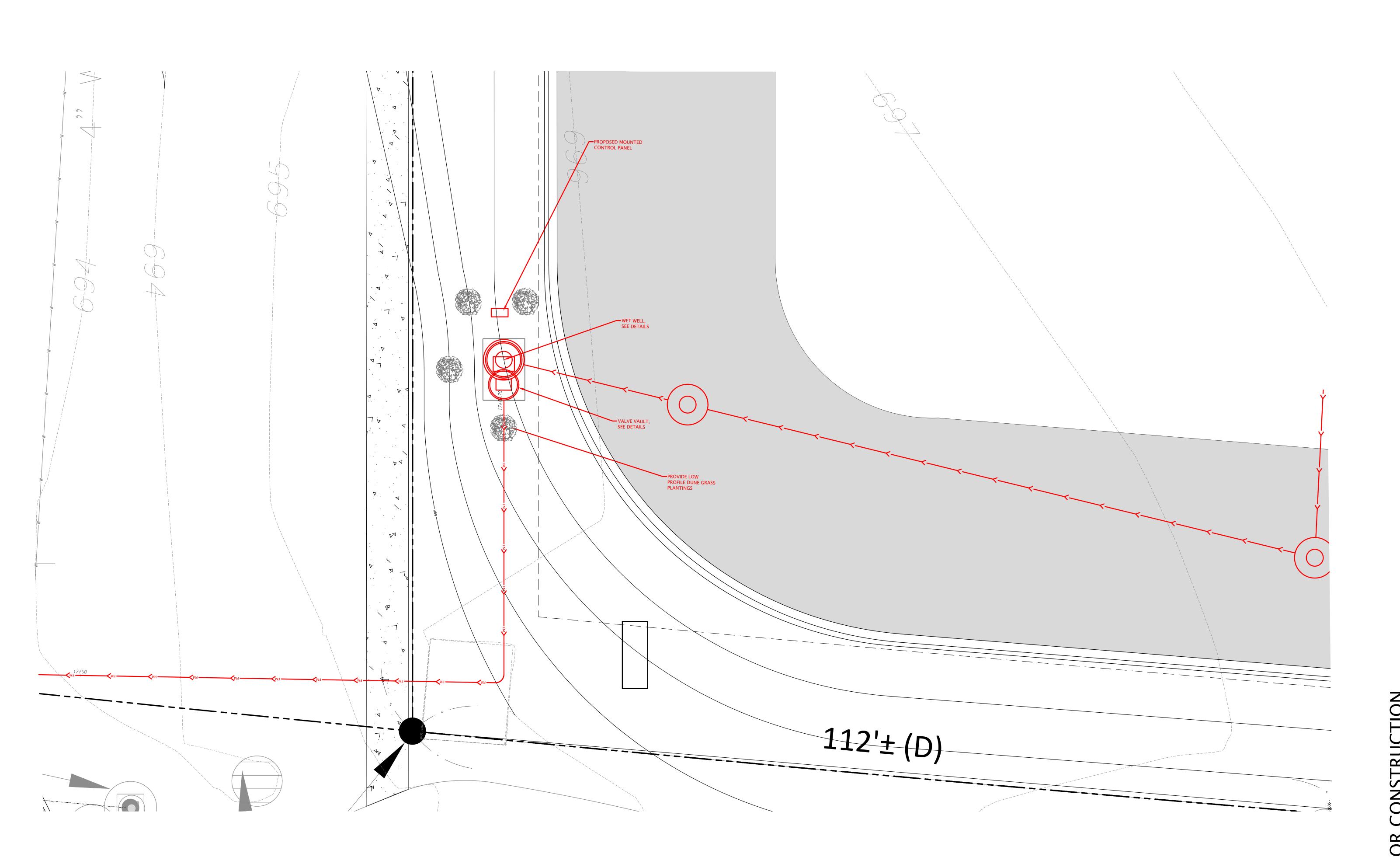
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DATE

02/01/24

PROJECT NO. 22-0581

C109





03/21/2024

DEVELOPMENT,

MJF

1151 W. US HWY 30 VALPARAISO, IN 46383

OPMENT MARSH

0' 15' 30' SCALE: 1" = 30'

SCALE: 1" = 30'

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DESIGN BY

HRS

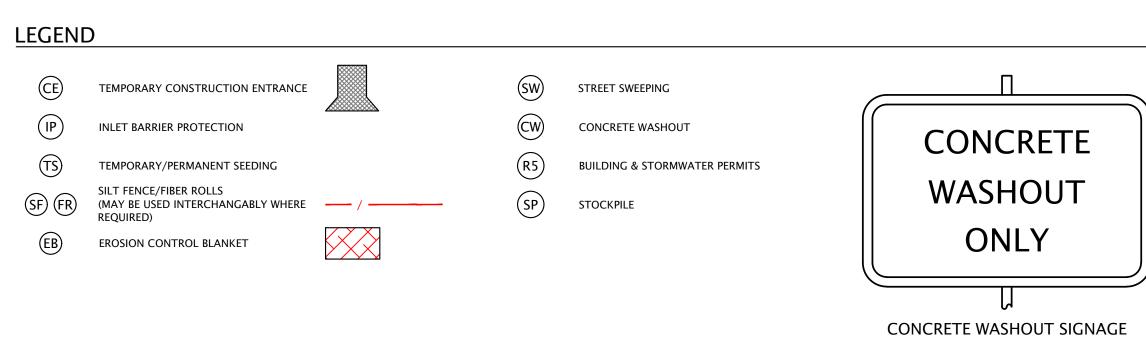
DATE

HRS

02/01/24

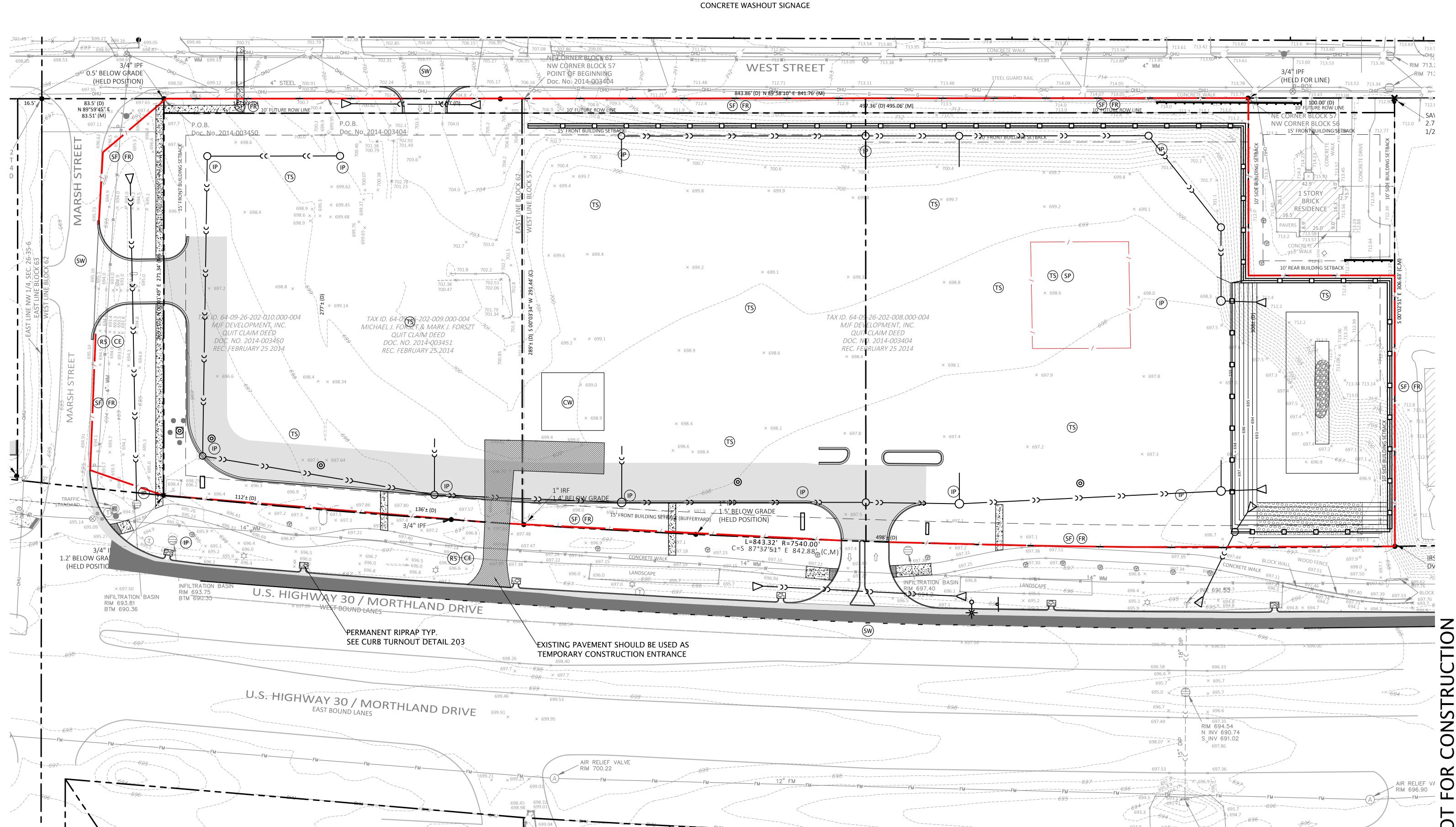
PROJECT NO. 22-0581

TOTAL DISTURBANCE AREA = 5.62 ac

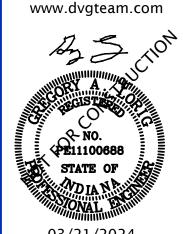


NOTES

- THE SITE CONTRACTOR SHALL PROVIDE EROSION CONTROL MEASURES IN ACCORDANCE WITH THE STORMWATER POLLUTION PREVENTION PLAN DURING DEMOLITION AND CONSTRUCTION ACTIVITIES. MEASURES MUST BE IMPLEMENTED PRIOR TO BEGINNING CONSTRUCTION.
- THE CONTRACTOR IS RESPONSIBLE FOR ANY DAMAGE AND/OR CLEANING TO THE STRUCTURE OR FEATURE. CORRECTIVE WORK INCURRED BY THE CONTRACTOR SHALL BE CONSIDERED INCIDENTAL TO THE CONTRACT.
- 3. THE CONTRACTOR IS RESPONSIBLE FOR COMPLIANCE WITH THE S.W.P.P.P. ANY FINES OR PUNITIVE MEASURES INCURRED BY THE PROJECT DUE TO FAILURE TO COMPLY WITH THE S.W.P.P.P. ARE THE RESPONSIBILITY OF THE CONTRACTOR. THESE COSTS SHALL BE CONSIDERED INCIDENTAL TO THE
- 4. DURING THE COURSE OF CONSTRUCTION, THE LOCAL ENFORCEMENT OF THE S.W.P.P.P. MAY REQUIRE ADDITIONAL EROSION CONTROL MEASURES TO BE INSTALLED TO ADDRESS SITE-SPECIFIC ITEMS NOT ANTICIPATED BY THIS PLAN. THESE ITEMS ARE CONSIDERED AN EXTRA TO THE CONTRACT, BUT ONLY TO THE EXTENT OF INITIAL INSTALLATION. CORRECTIVE WORK AND MAINTENANCE SHALL BE CONSIDERED INCIDENTAL AND SHALL NOT BE CONSIDERED AN EXTRA.
- THE SITE CONTRACTOR SHALL INSTALL THE CONSTRUCTION ENTRANCE AND PLACE PERIMETER SILT FENCING/FIBER ROLLS PRIOR TO COMMENCING ANY SOIL DISTURBANCE. SEE SITE PLAN FOR LOCATIONS. THE CONSTRUCTION ENTRANCE SHALL SERVE AS SITE ACCESS FOR ALL CONSTRUCTION TRAFFIC INGRESS AND
- THE SOIL STOCKPILE SHALL BE PROTECTED BY SILT FENCE/FIBER ROLLS SURROUNDING THE PILE AND THE PILE SHALL BE TEMPORARILY SEEDED IF THE STOCKPILE REMAINS DORMANT FOR GREATER THAN 7 DAYS. THE PILE
- DURING SOIL-DISTURBING ACTIVITIES, THE CONTRACTOR SHALL CREATE DIVERSION SWALES AND INSTALL
- 8. UPON COMPLETION OF THE ROUGH GRADING, ALL AREAS AFFECTED BY CONSTRUCTION SHALL BE TEMPORARILY SEEDED IF THEY WILL REMAIN DORMANT FOR GREATER THAN 7 DAYS. THESE AREAS SHALL BE STABILIZED WITHIN 14 DAYS OF REMAINING DORMANT AND EROSION CONTROL BLANKETS SHALL BE
- 9. CONTRACTOR SHALL PERFORM STREET SWEEPING WHENEVER TRACKING OF MUD, DIRT, AND CONSTRUCTION



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SCALE: 1" = 30'

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SITE DEVELOPMENT COMMON EXCAVATION AND EARTHWORK **GENERAL SPECIFICATIONS**

A Geological Investigation report by the OWNER shall be considered a part of this plan set.

1.0 Quality Assurance:

1. Contractor shall notify the Construction Manager, Architect, Engineer and testing laboratory inspector when common excavation and earthwork is scheduled. Earthwork operations which require inspecting and testing by testing laboratory inspector shall not be performed unless testing laboratory inspector is present.

- 2. Contractor shall provide a 1-year warranty against settlement and damage caused by settlement for common excavation and earthwork.
- 3. If settlement occurs within 1 year after the date of Substantial Completion, the Contractor shall remove the affected surface feature, provide additional suitable fill, thoroughly compact and restore the surface feature to its original undisturbed condition.

2.0 Testing:

1. An inspector from the Owner's soils testing laboratory shall, during the common excavation work operations, provide the

- a. Test & Classify on-site excavated soils for reuse as topsoil, common site fill, embankment fill and structural fill.
- b. Test materials furnished from any off-site sources to verify compliance with specified requirements. c. Observe proofing rolling of exposed subsoil in areas where grades will be raised and provide recommendations for soil
- correction to ensure that unstable materials have been removed. d. Inspect placement and compaction of common site fill, embankment fill and structural fill to ensure the material being
- compacted is in accordance with specified requirements. For each lift, a minimum of 1 density test for every 10,000 square feet of lawn surface area, and 5,000 square feet of paved surface area, and 500 square feet of proposed building area is required.
- e. Density tests are required for all subgrade/subsoil in areas that have been cut to rough grade elevations, after soils have been compacted to ensure soil compaction density is in accordance with the specified requirements. Test
- frequency shall be as described above in sub-paragraph 1.d.. 2. Tests and analysis of fill materials shall be performed in the laboratory in accordance with ASTM D1557.
- 3. Testing shall be performed as directed by the Soils Report Engineer. Compaction Testing shall be performed in accordance with ASTM D2922 and D3017.

3.0 Special Weather Protection:

1. Construction shall be limited during cold weather to prevent the formation of frost and snow accumulation to occur in materials used for site fill or in soils where site excavation is taking place. All areas that are scheduled for excavation activity shall be protected from freezing and snow accumulation. Any frozen material shall be removed and disposed of off site.

4.0 Clearing & Grubbing:

1. Contractor shall provide all clearing, grubbing, removal and disposal of all vegetation and debris related to the existing

2. Vegetation debris shall be removed from site and transported to a local and state authorized disposal sites

- 1. The project has a depth of topsoil variation throughout the site. The geotechnical report shows the topsoil depths at several locations throughout the project site. The Contractor shall strip and stockpile all topsoil at the location designated in the Site Development Drawings or as directed by the owner.
- 2. Topsoil removal material shall consist of fertile, friable, organic surface soil stripped from the site and shall be free of
- subsoil, brush, turf grasses, weeds, roots, stumps, stones larger than 1-inch in diameter and other contaminated matter."
- 3. Topsoil shall be stockpiled so that it may be reused and re-spread on site over Lawn and Landscaped areas. 4. The topsoil stockpile area shall be properly protected against soil erosion into the adjacent drainage system.

6.0 Borrow Material/Embankment & Structural Fill Material:

- 1. Borrow material for structural fill shall be first excavated from on site source locations as defined by the Soils Report
- 2. Structural fill material shall be placed under all utility trench corridors, building pad locations, paved parking, driveway, sidewalk and roadway areas.
- 3. Common site and embankment fill shall be placed under lawn, landscape and detention pond areas.
- 4. Maintain moisture content of structural fill within plus or minus 3 percent of the optimum moisture content as determined by the Modified Proctor Test.
- 5. Contractor shall provide subgrade conditions meeting the design grades for pavements, exterior walks, curbs and
- building pads. 6. Contractor shall only place approved fill material under proposed building pads and parking areas
- 7. Contractor shall undercut any areas that do not meet the requirements for structural fill and shall replace with structural

7.0 Excavation:

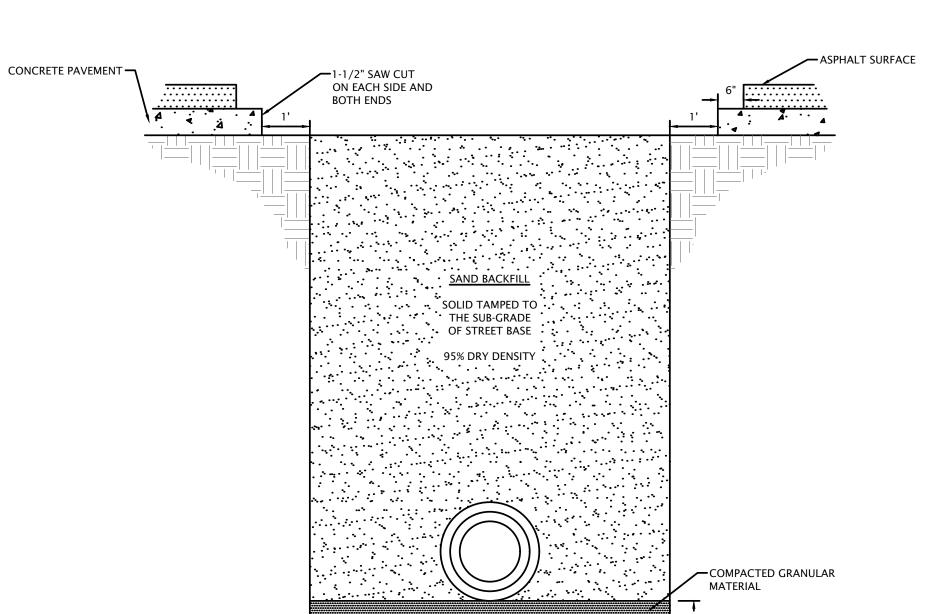
- 1. Protect all existing natural features on site.
- 2. Install soil erosion prevention measures in accordance with local and state ordinances and in accordance with the soil erosion control project drawings.
- 3. All proposed contours shown on this set of plans are proposed surface elevation. All fill shall be placed as structural fill for buildings and parking lots.
- 4. Prior to excavation an on-site Pre-construction Meeting shall be held between the Engineer, Owner/Owner's
- Representative and General Contractor to discuss earthwork protocol.
- 5. During the progress of the work, if subsurface or latent physical conditions are encountered at the site differing materially from those indicated in the contract or if ordinarily encountered at the site, the party discovering such conditions shall promptly notify the Owner/Owner's Representative/General Contractor and the Engineer in writing of the specific differing conditions. Upon written notification, the Engineer and Owner/Owner's Representative/General Contractor will investigate the conditions, and determine if adjustments to the Construction Documents and/or to the Contract are warranted. No contract adjustment which results in a benefit to the Contractor will be allowed unless the Contractor has provided the required written notice of a changed condition.

8.0 Compaction:

- 1. Exercise care when compacting exposed soils relative to water table, rain or other moisture conditions.
- 2. Maintain moisture content of embankment material and structural fill material near optimum as recommended by the soils testing laboratory and Soil Boring Engineer. Maintain optimum moisture content of backfill and fill material to attain the required compaction density.
- 3. Backfill common site fill, embankment fill, structural fill and utility trenches to contours and elevations defined on the project site development plans.
- 4. Systematically backfill to allow maximum time for optimum compaction and do not backfill over porous, wet or spongy
- subgrade surfaces. 5. Employ a soils placement and compaction method that does not disturb or damage work performed and that maximizes
- soil compaction. 6. All common site, embankment and structural fill shall be place and compacted in continuous layers/lifts not exceeding
- 8-inches loose depth. 7. Compact subsoil for structural fill to 95% of the Modified Proctor Maximum Dry Density (ASTM D1557) beneath all
- building pad locations. 8. Compact subsoil for structural fill to 95% of Modified Proctor Maximum Dry Density (ASTM D1557) beneath all pavement
- areas and utility corridor trenches. 9. Compact subsoil for common site fill and embankment fill to 90% of the Modified Proctor Maximum Dry Density (ASTM
- D1557) beneath all lawn, landscape and detention pond areas.
- 10. Compact subsoil under building pad area to achieve soil-bearing capacities of 3,000 psf at a distance of 4-feet below the proposed finish floor elevations of all building ads.
- 11. If tests indicated work does not meet specified requirements, all sub-standard work shall be immediately removed, replaced and retested at no expense to the Owner.

GENERAL NOTES

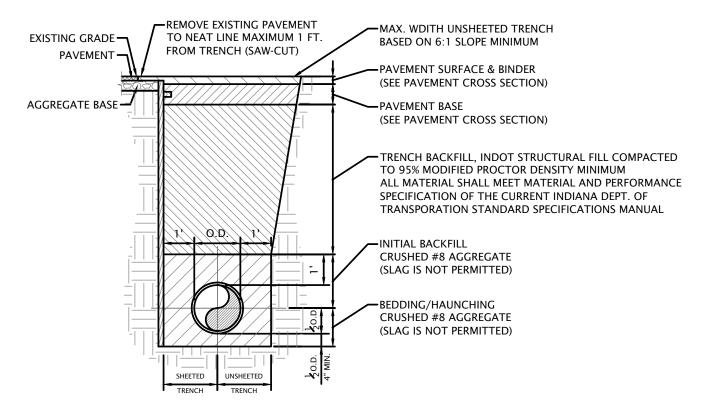
- 1. City of Valparaiso, DVG Team, Inc. (Engineer) and any Utility Company affected must be notified at least two working days prior to commencement of work. Prior to construction the contractor is to call
- 2. Elevation Datum is U.S.G.S.
- 4. The locations of existing underground utilities, such as water mains, sewer, gas lines, etc., as shown on the plans have been determined from the best available information and is given for the convenience of the contractor However, the engineer and the owner do not assume responsibility for the accuracy of the locations shown. It shall be the responsibility of the contractor to contact all utility companies and their facilities shall be located prior to commencement of any work.
- 5. Wherever obstructions not shown on the plans are encountered during the progress of the work and interfere to such an extent that alteration in the plans is required, the engineer shall be notified prior to any changes and any changes shall only be as approved via written instruction by the Engineer and the local Municipal Engineer.
- 6. As-built drawings shall be prepared by the contractor and submitted to the engineer as soon as the project is completed. Any change in the length, location or alignment shall be shown in red. "AS BUILT" drawings shall be forwarded to the appropriate utility organizations. Four (4) copies shall be submitted to the Municipal Engineer.
- 7. All proposed sanitary sewer, storm sewer, water main and service lines under and within 2' of pavement, curbs, and sidewalk shall be backfilled with crushed limestone (INDOT #53) or material consistent with Class I or II material as described in ASTM D2321 placed in 8" maximum layers and mechanically compacted to 95% modified proctor density. Slag is not permitted.
- 8. Materials used for water, sanitary sewer, storm sewer and streets shall conform to the City of Valparaiso standards
- 9. Any existing public improvements (sidewalks, curb and gutter, etc.), disturbed during construction shall be replaced in kind, or per current of City of Valparaiso specifications as directed by the Municipal Engineer.
- 10. All public street construction shall meet performance standards of the current edition of the Indiana Department of Transportation Standard Specifications.
- 11. Street signage shall be included in accordance with the MUTCD requirements applicable at the time of
- 12. The Owner/General Contractor shall be responsible for any and all utility new customer form submissions. Utility company review typically cannot begin until all new customer forms have been submitted.



COMPACTED GRANULAR MATERIAL SHALL CONSIST OF WELL-GRADED CRUSHED STONE, CRUSHED GRAVEL, WELL-GRADED GRAVEL MEETING THE REQUIREMENTS OF A.S.T.M. DESIGNATION C33 GRADATION 67 (3/4 INCH TO NO. 4).

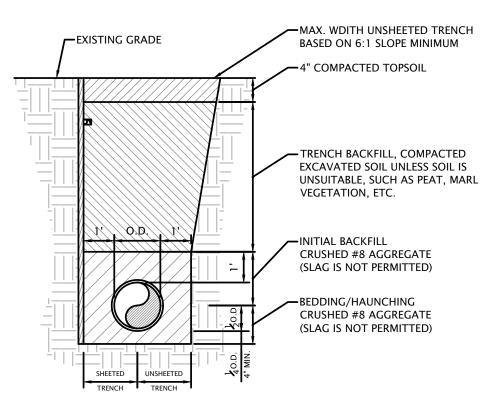
TRENCH REQUIREMENTS (NOT TO SCALE)

REPAIRS TO PAVEMENT CUTS OR TRENCHES FOR UTILITY PURPOSES BACKFILLING OF TRENCHES IN PAVED STREETS



PIPE BEDDING/TRENCH BACKFILL

FOR TRENCH IN PAVEMENT AREAS



PIPE BEDDING/TRENCH BACKFILL

FOR TRENCH IN GRASS/LANDSCAPED AREAS



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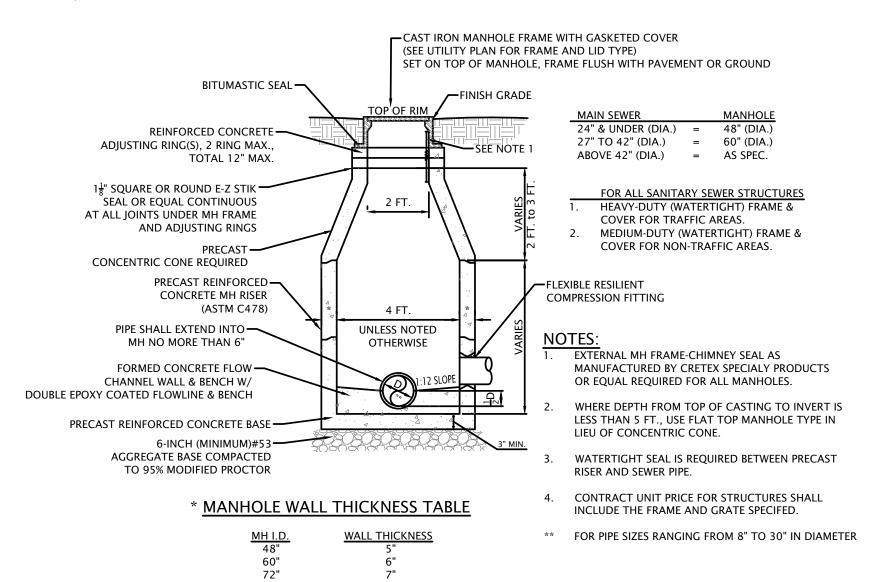
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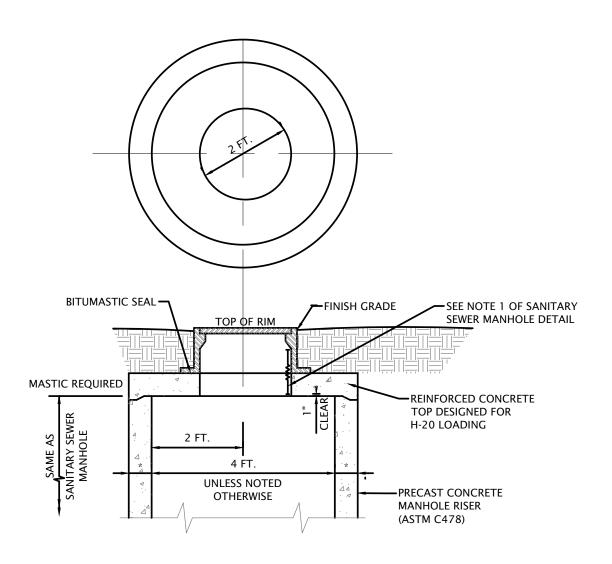
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SANITARY SEWER GENERAL NOTES

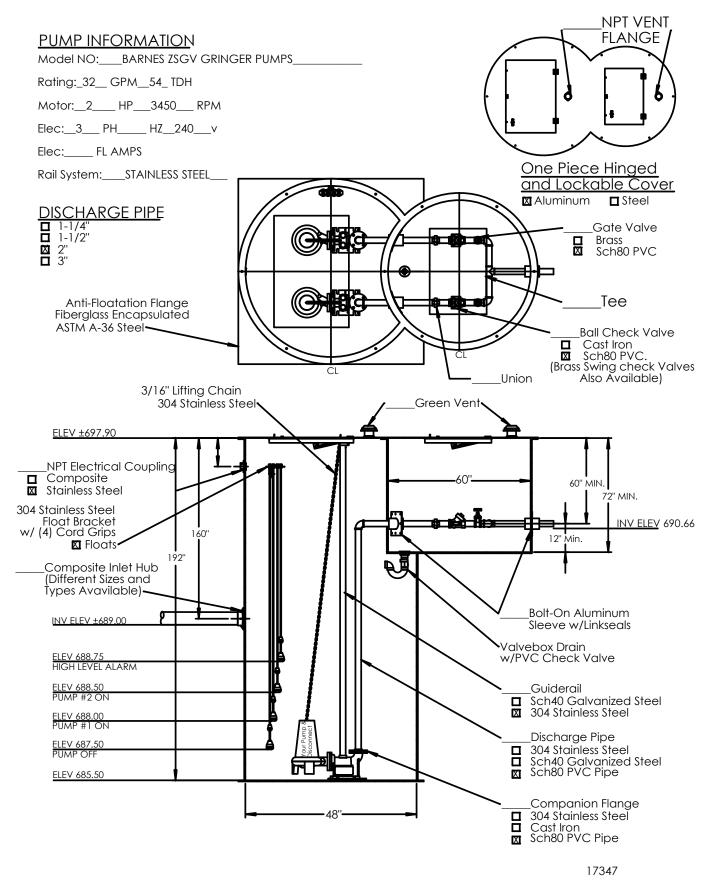
- 1. Sanitary sewer pipe shall be PVC (SDR 26) ASTM D-3034 with push-on rubber gasket joints and shall be in accordance with ASTM C-3212, unless otherwise noted on the plans for portions to be PVC (SDR 21).
- 2. All sanitary sewer manholes shall be air tested for leaks in accordance with ASTM C1244-93 and Standard Test Method for Concrete Sewer Manholes by Negative Air Pressure (Vacuum) Test.
- 3. A deflection test shall be performed on each flexible pipe following the elapse of thirty (30) days after the placement of the final backfill. No pipe shall exceed a deflection of five percent (5%) or greater. The diameter of the rigid ball or mandrel used for a deflection test shall be no less than ninety-five percent (95%) of the base inside diameter of the pipe to be tested dependent on what is specified in the corresponding ASTM standard. The test shall not be performed with the aid of a mechanical pulling device.
- 4. A leakage test shall be performed using one of the following leakage test types. a.) A hydrostatic test shall be performed with a minimum of two (2) feet of positive head. The rate of exfiltration or infiltration shall not exceed two hundred (200) gallons per inch of pipe diameter per linear mile per day.
- An air test shall conform to ASTM F1417-92, Standard Test Method for Installation Acceptance of Plastic Gravity Sewer Lines Using Low-Pressure Air, for plastic pipe.
- 5. All sanitary sewer shall be inspected by Valparaiso City Utilities.
- 6. Floor drains cannot drain directly to the sanitary
- 7. No Ductile Iron pipe for sanitary sewer.
- 8. Only concentric cones allowed for manholes.



SANITARY SEWER MANHOLE (NOT TO SCALE)



MANHOLE TOP (FLAT TOP)



NOTES:

1. THIS DRAWING IS PRELIMINARY LAYOUT ONLY. NOT FOR CONSTRUCTION. CONSTRUCTION DRAWINGS WILL BE FORWARDED UPON RECEIPT OF APPROVED SUBMITTALS.

- SOME ITEMS NOT SHOWN FOR CLARITY.
- 3. ADEQUATE LIFTING POINTS TO BE PROVIDED.
- 4. CONTRACTOR TO FILL INLET HUB WITH GROUT AFTER INSTALLING FIELD PIPING.

5. ALL COMPRESSION COUPLINGS, EPC'S & FCA'S TO BE RESTRAINED WITH A MINIMUM OF 2 CONTROL RODS WHEN REQUIRED.

- 6. LIFT STATION TO BE INSTALLED BY AN EXPERIENCED AND QUALIFIED CONTRACTOR.
- 7. ALL CONCRETE WORK IS THE RESPONSIBILITY OF THE CONTRACTOR.
- 8. CONTRACTOR AND OR ENGINEER TO VERIFY ALL DIMENSIONS, ELEVATIONS, PIPING LAYOUT, AN ORIENTATION OF INLET(S), DISCHARGE AND CONDUIT(S).
- 9. ELECTRICAL COMPONENTS IN THE WET WELL SHALL BE RATED FOR CLASS I, DIV. I, GROUP C & D LOCATIONS.
- 10. 2x2" CONDUIT FROM CONTROL BASIN TO PANEL.

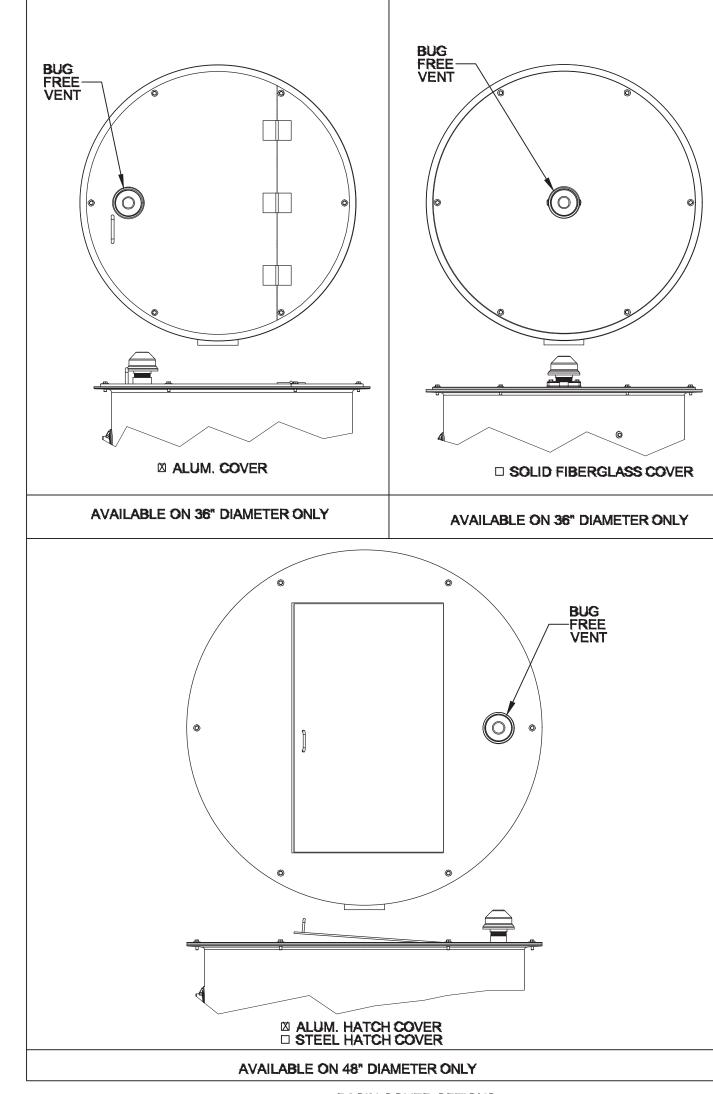
11. CONTRACTOR TO ORDER CONTROL AND POWER CORDS OF SUFFICIENT LENGTH TO REACH CONTROL PANEL FROM POINT OF ORIGIN ON PUMPS WITHOUT SPLICING.

12. WET WELL SHALL BE A PRE-MANUFACTURED FIBERGLASS UNIT BY TOPP INDUSTRIES, BARNEYS PRODUTS OR OTHER EQAUL APPROVED BY ENGINEER OF RECORD.

13. CONTRACTOR SHALL USE GASVODA & ASSOCIATES INC FOR LIFT STATION SUPPLY & DESIGN, OR OTHER EQUAL APPROVED BY ENGINEER OF RECORD.

- 14. GASVODA CONTACT REPRESENTATIVE:
- Andy Beison 708-878-4607
- abeison@gasvoda.com
- 15. CONTRACTOR SHALL PROVIDE MEANS FOR PORTABLE GENERATOR HOOKUP.
- 16. PROVIDE LOCKS ON LIFT STATION HATCHES AND CONTROL PANEL. FURNISH 3 SETS OF KEYS TO OWNER.

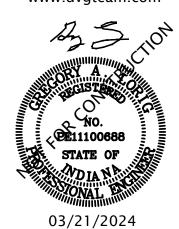
LIFT STATION DETAIL (1)



BASIN COVER OPTIONS LIFT STATION DETAIL (2)



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NO SCALE

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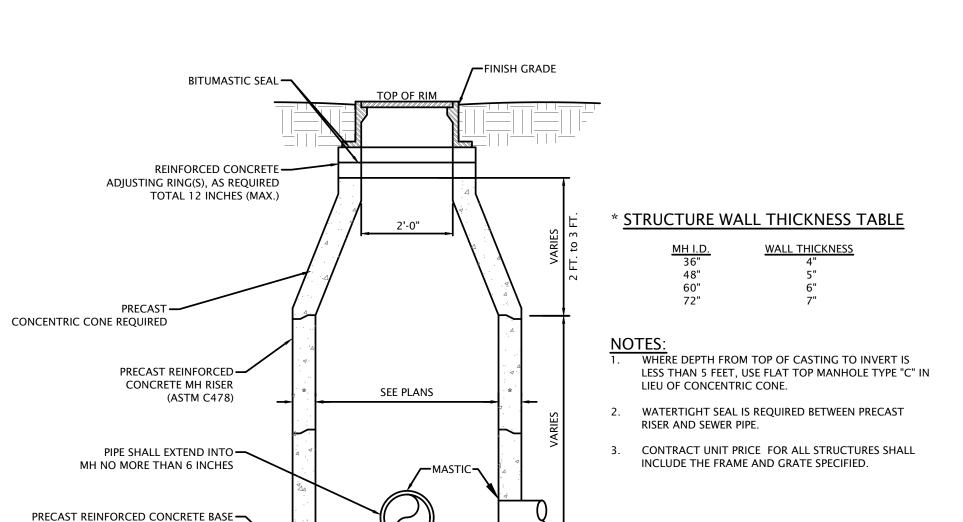
STORM SEWER GENERAL NOTES

ON 6-INCH DEPTH (MIN.)

TO 95% MODIFIED PROCTOR

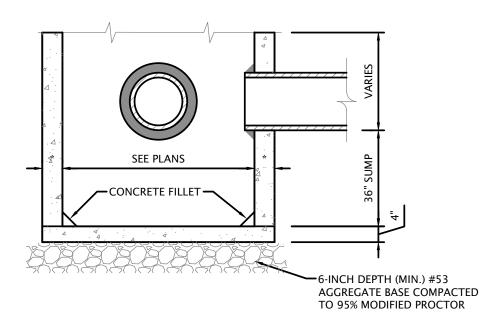
#53 AGGREGATE BASE COMPACTED

- 2. The maximum allowable rate of infiltration or exfiltration shall not exceed 100 gallons, per 24 hours per inch-diameter per mile of sewer pipe.
- 3. Storm sewers shall be as noted on the plans. If approved by the Engineer, an alternative storm sewer pipe 12 inches and larger can be reinforced concrete minimum Class III, wall B conforming to ASTM C-76; Corrugated High-Density Polyethylene Pipe with smooth interior (ADS N-12) conforming to AASHTO M-294; Corrugated Polypropylene Pipe with smooth interior conforming to AASHTO M-330 (ADS HP STORM); Corrugated High-Density Polyethylene Pipe with smooth interior (PRINSCO, GOLDFLO) conforming to AASHTO M-294 or other INDOT, Type 2 storm sewers as approved by the Engineer.
- 4. All HDPE storm sewer pipe shall be tested with a mandrel. Maximum deflection shall meet ASTM C1244-93 and Standard Test Method for Concrete Sewer Manholes 30 days after backfill, and should be performed without the aid of a mechanical pulling device. The deflection testing shall meet all



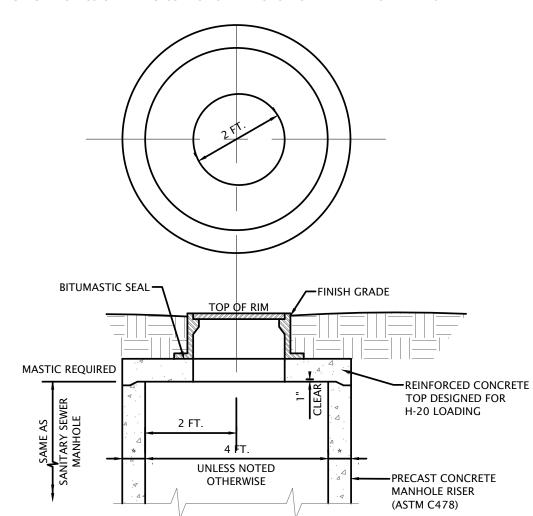
INLET MANHOLE/MANHOLE (NOT TO SCALE)

INLET MANHOLE (IMH) USES AN OPED LID - SEE STORM CALLOUT FOR FRAME & LID TYPE MANHOLE (MH) USES A CLOSED LID - SEE STORM CALLOUT FOR FRAME & LID TYPE.



CATCH BASIN (NOT TO SCALE)

SEE INLET MANHOLE/MANHOLE DETAIL CATCH BASIN USES EITHER CLOSED OR OPEN LIDS - SEE UTILITY PLAN FOR FRAME & LID TYPE.

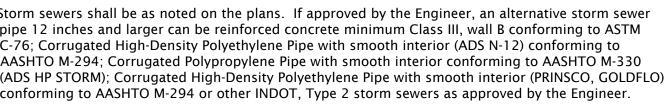


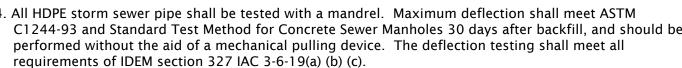
MANHOLE TOP (FLAT TOP) (NOT TO SCALE)

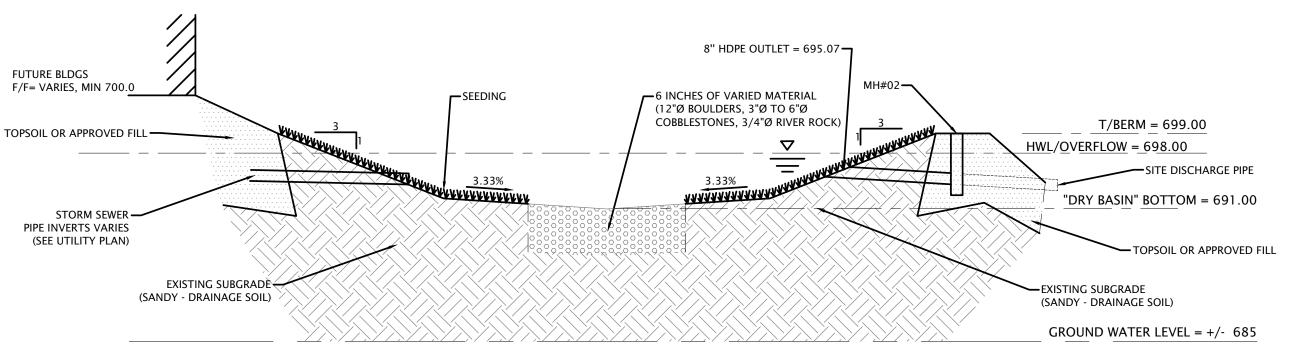
SEE SANITARY MANHOLE NOTES

USED WHERE RESTRICTED HEAD ROOM WILL NOT ALLOW FOR TAPERED WALLS

1. Footing drains, sump pump drains and outside drains shall discharge to the storm sewer where storm sewer is provided.



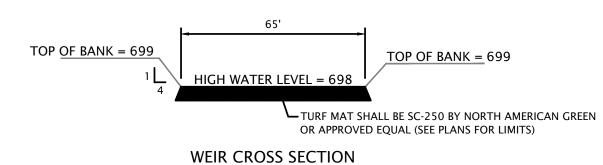




COMBINATION BASIN (DRY + INFILTRATION)

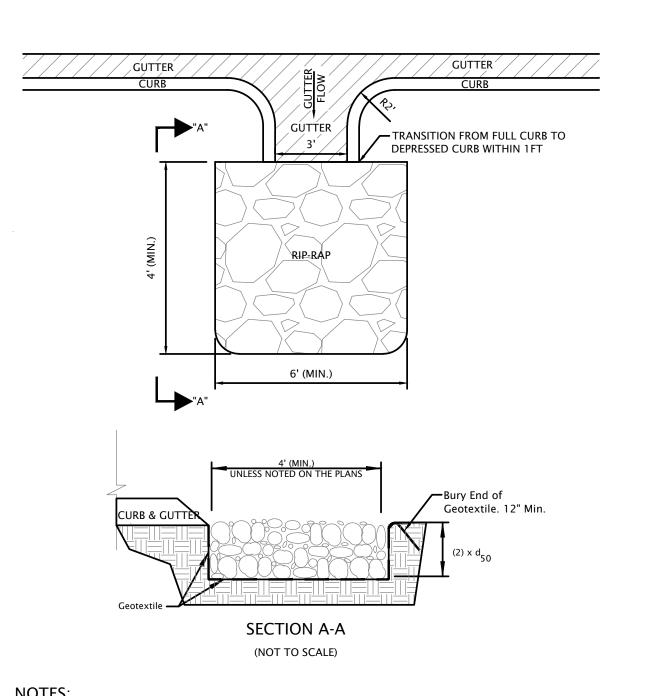
AVOID CLOGGING OR COMPACTION OF NATIVE SOILS TO BE INFILTRATED WITH BASIN. DO NOT STOCKPILE ANY MATERIAL WITHIN EXTENT OF BASIN.

MINIMIZE CONSTRUCTION TRAFFIC OVER BASIN. USE LIGHTED EQUIPMENT POSSIBLE FOR MATERIAL PLACEMENT, SPREADING, AND FINAL GRADING.



OVERFLOW WEIR

(NOT TO SCALE)



HARD, ANGULAR AND WEATHER-RESISTANT, HAVING A SPECIFIC GRAVITY OF AT LEAST 2.5 WELL-GRADED STONE, 50% (BY WEIGHT LARGER THAN THE SPECIFIED d50; HOWEVER, THE LARGEST PIECES SHOULD NOT EXCEED TWO TIMES THE SPECIFIED d50 AND NO MORE THAN 15% OF THE PIECES (BY WEIGHT) SHOULD BE LESS THAN 3 INCHES. USE GEOTEXTILE FABRIC FOR STABILIZATION AND FILTRATION OR SAND/GRAVEL LAYER PLACED UNDER ALL PERMANENT RIP RAP INSTALLATIONS. 2:1 OR FLATTER, UNLESS APPROVED IN THE EROSION AND SEDIMENT CONTROL PLAN.

CURB TURNOUT

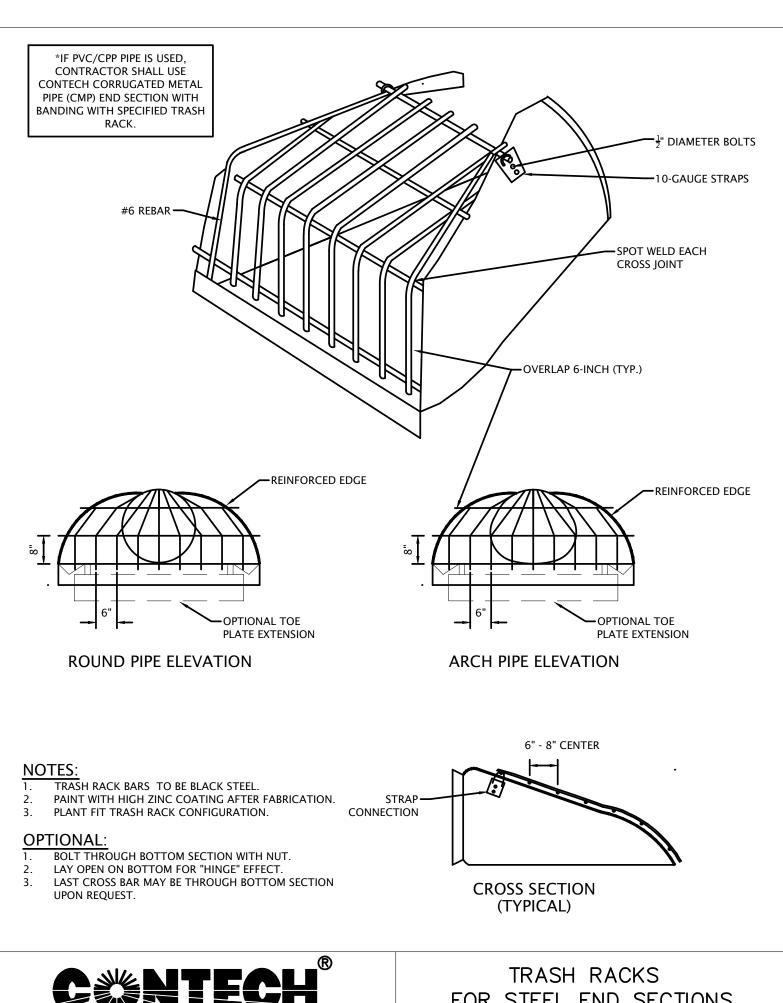
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MATERIAL:

FILTER:

SLOPE:

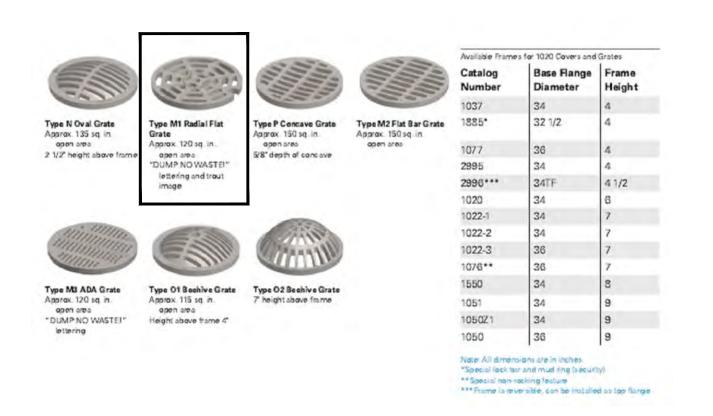
GRADATION:





FOR STEEL END SECTIONS







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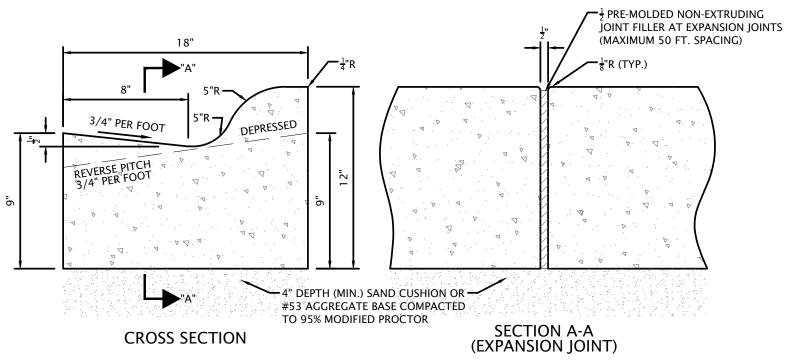
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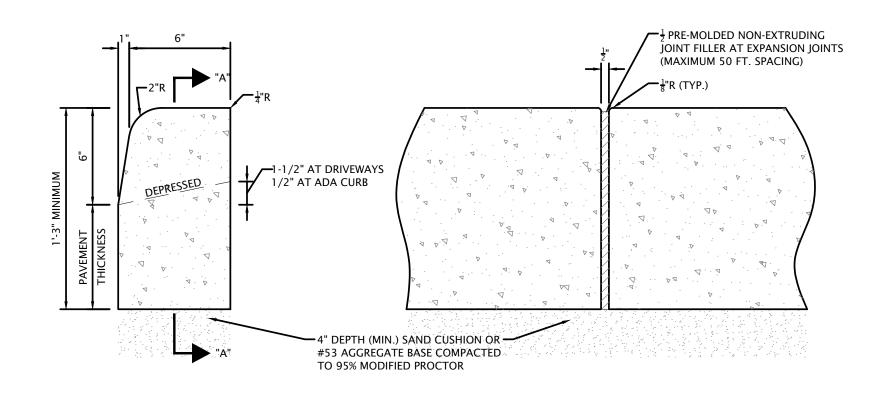
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CONCRETE ROLL CURB & GUTTER



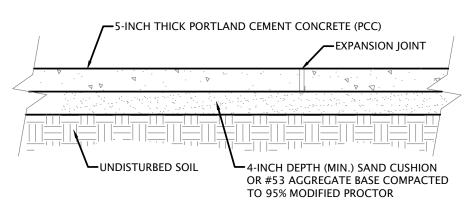
CROSS SECTION

SECTION A-A (EXPANSION JOINT)

6-INCH BARRIER CURB (NOT TO SCALE)

CONCRETE CURB & GUTTER NOTES

- 1. PROVIDE TWO #4 BARS (10 FT. LONG) CENTERED IN EACH
- UTILITY TRENCH. 2. (NOT USED)
- 3. COST OF BARS SHALL BE INCLUDED IN THE UNIT PRICE (PER LINEAR FOOT) FOR CURB AND GUTTER.
- 4. CONTRACTION JOINTS SHALL BE PLACED AT EQUAL SPACES BETWEEN NORMAL EXPANSION JOINTS.
- 5. $\frac{1}{2}$ " EXPANSION JOINTS AT 50 FEET MAXIMUM. 6. CONTRACTION JOINTS AT 20 FEET MAXIMUM.
- 7. CONTRACTION JOINTS SHALL BE SAW CUT IN THE UPPER $\frac{1}{3}$ OF CURB AND GUTTER WITHIN 7 DAYS OF PLACEMENT
- 8. SAW CUT EXISTING CURB PRIOR TO REMOVAL. PROVIDE NEAT AND CLEAN FACE TO ABUT NEW CURB.
- 9. USE 4,500 (MIN.) PSI CONCRETE.
- 10. DEPRESS DRIVEWAYS, AS REQUIRED.

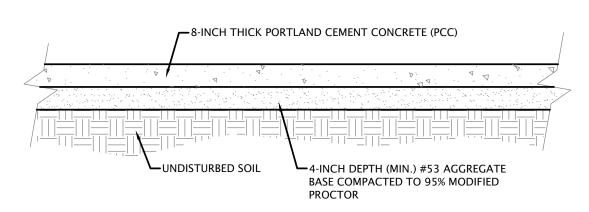


SIDEWALK (NOT TO SCALE)

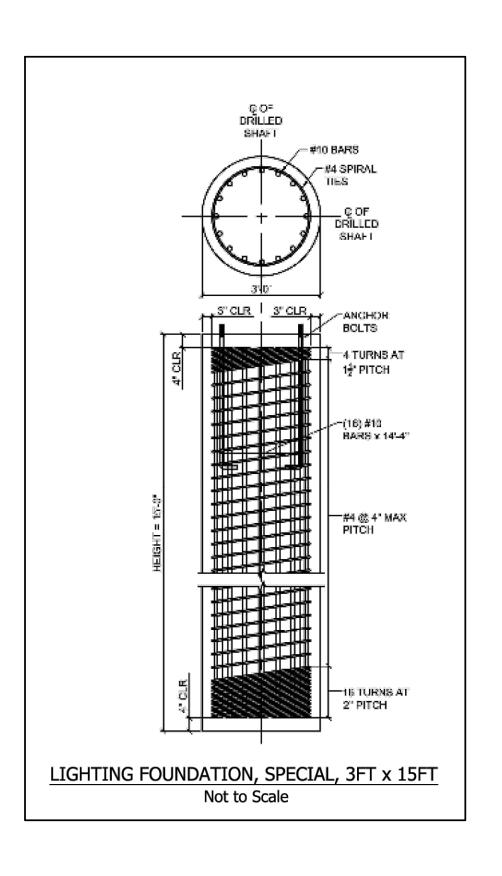
 $\frac{1}{4}$ INCH WIDE CONSTRUCTION TOOLED JOINT SPACED AT A DISTANCE EQUAL TO THE WIDTH

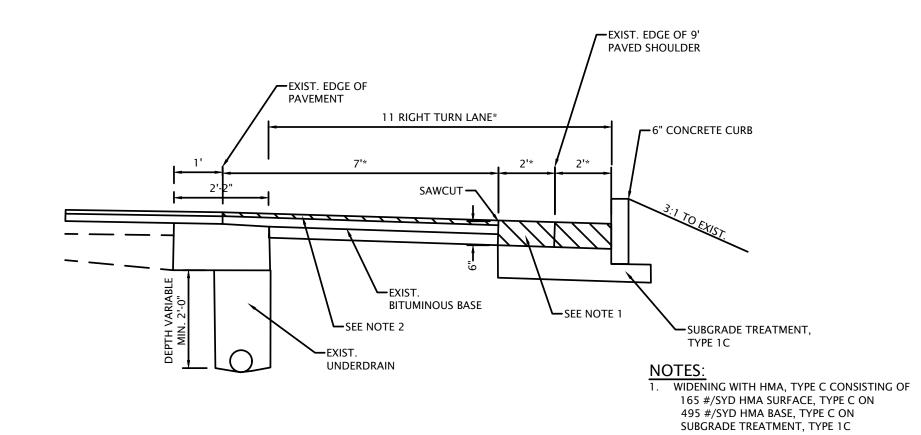
CONCRETE FLAT WORK NOTES:

- 1. PROVIDE $\frac{3}{4}$ -INCH EXPANSION JOINT CONFORMING TO ASTM D-1751 ALONG BACK OF CURBS, DRIVEWAYS, STEPS, WALLS AND ACROSS THE SIDEWALK AT INTERVALS NOT TO EXCEED 40 FEET.
- 2. EXTEND EXPANSION JOINT MATERIAL FULL DEPTH OF THE SLAB. 3. PROVIDE TOOLED "V-GROOVE" CONTROL JOINT SPACED AT A DISTANCE EQUAL TO THE WIDTH OF THE WALK BUT NOT OVER 10 FEET APART, OR AS SPECIFIED ON THE SITE PLAN.
- 4. CONCRETE SHALL BE CLASS "A" & 4,000 PSI IN 28 DAYS; MEETING THE REQUIREMENTS OF THE MOST RECENT INDOT STANDARD SPECIFICATIONS MANUAL.
- 5. ALL CONCRETE FLAT WORK SHALL BE REINFORCED WIRE MESH 6"x6"x 10/10 GAUGE.



CONCRETE DRIVEWAY APRON (NOT TO SCALE)

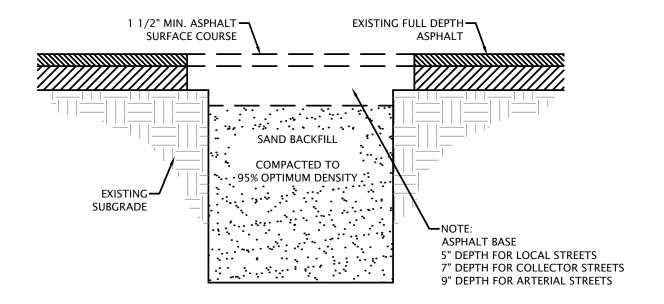




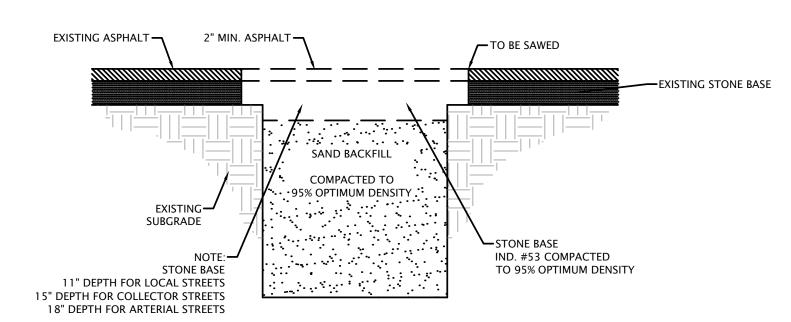
US 30 IMPROVEMENTS (NOT TO SCALE)

3. TYPICAL WIDTH VALUES, SEE PLAN VIEW

2. SURFACE MILLING, 1.5" & 165#/SYD HMA SURFACE, TYPE C

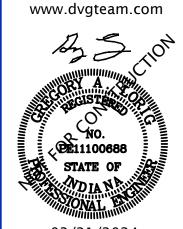


STREET CUT 3 **FULL DEPTH ASPHALT** (NOT TO SCALE)



STREET CUT 4 **ASPHALT OVER STONE** (NOT TO SCALE)

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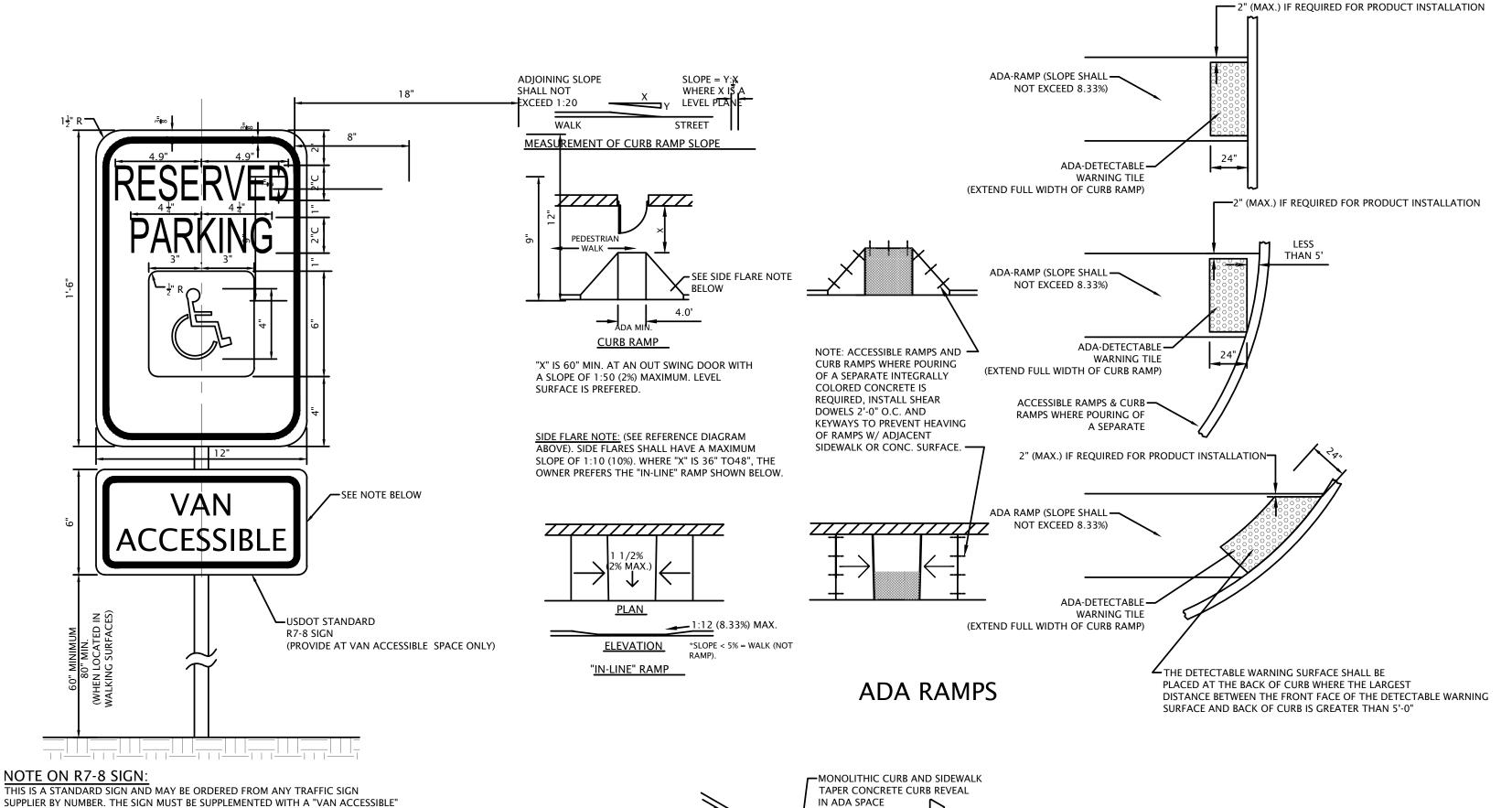
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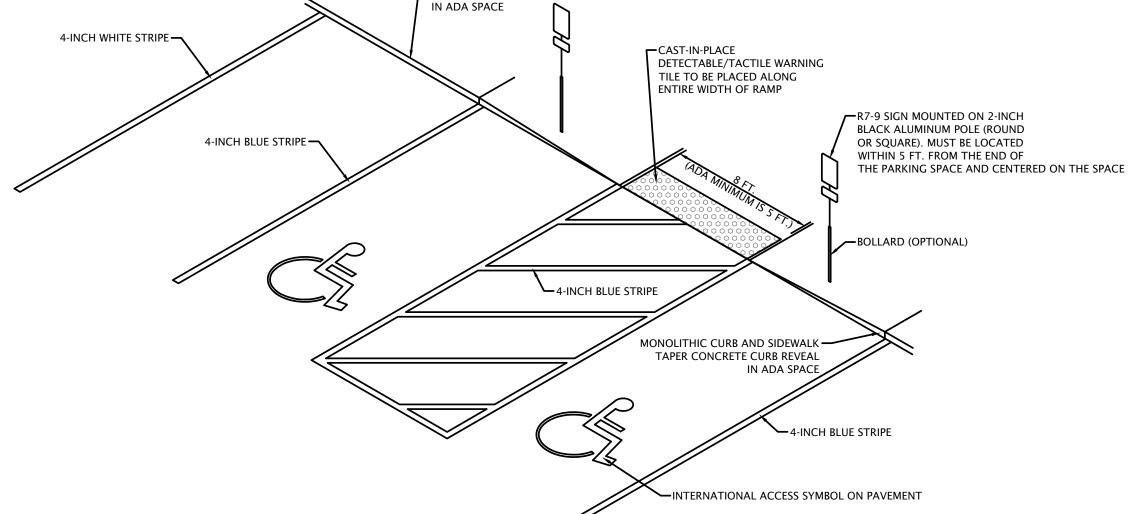
PROJECT NO. 22-0581



ADA SIGNAGE

RESERVED SPACE(S) A MUNICIPALITY MAY IMPOSE. CONFIRM WITH LOCAL

SIGN AS APPLICABLE AND/OR AMOUNT OF THE FINE FOR ILLEGALLY PARKING IN THE



ADA NOTES

A CURB RAMP(S) MUST BE PROVIDED ALONG AN ACCESSILBLE PATH FROM THE PARKING LOT TO OWNERS CURBED SIDEWALK.

A CURB RAMP(S) MUST ALSO BE PROVIDED IN THE PARKING LOT AT ALL INTERMEDIATE AND PERIMETER CURBS ALONG THE ACCESSIBLE ROUTE CONNECTING TO PUBLIC SIDEWALKS.

A RAMP IS ANY SLOPE GREATER THAN 1:20 (5%) AND SHALL HAVE A MAXIMUM SLOPE OF 1:12 (8.33%). THE MAXIMUM SLOPE IS 1" OF RISE PER FOOT OF DISTANCE TRAVELED

A RAMP SHALL HAVE A DETECTABLE SURFACE IDENTIFYING THE AREA OF THE RAMP. DETECTABLE WARNINGS SHALL CONSIST OF TRUNCATED DOMES ALIGNED IN A SQUARE OR RADIAL GRID. TRUNCATED DOMES SHALL HAVE A BASE DIAMETER OF 0.9 IN. TO 1.5 IN. MAXIMUM, A TOP DIAMETER OF 50% OF THE BASE DIAMETER MINIMUM TO 65% OF THE BASE DIAMETER MAXIMUM AND A HEIGHT OF 0.2 IN. DOMES SHALL BE SPACED CENTER-TO-CENTER OF 1.6 IN. MINIMUM TO 2.4 IN. MAXIMUM AND A BASE-TO-BASE SPACING OF 0.65 IN. MINIMUM, MEASURED BETWEEN THE MOST ADJACENT DOMES.

ADA DETECTABLE WARNING STRIPS SHALL BE A CAST IN PLACE DETECTABLE/TACTILE WARNING TILE. THE TILE MUST MEET ALL ADA REQUIREMENTS, AND SHALL BE INSTALLED IN ACCORDANCE WITH THE MANAFACTURERS INSTRUCTIONS. A 5-YEAR WARRANTEE SHALL BE PROVIDED BY THE MANUFACTURER FOR THE INSTALLED TILE FOR COLORFASTNESS AND DURABILITY. DETECTABLE/TACTILE WARNING TILE SHALL BE ARMOR-TILE, ACCESS-TILE OR AN APPROVED VENDOR.

THE LEADING EDGE OF THE DETECTABLE WARNING TILE MUST BE CLOSER THAN 5' FROM THE VEHICLE SURFACE, AND HAVE A MINIMUM OF 24" LENGTH ALONG THE PEDESTRIAN TRAVEL DIRECTION. THE TILE MAY BE CUT TO MATCH A RADIUS AT THE CURB IF ONE END OF THE RAMP EXCEEDS THE 5'

THE CLEAR WIDTH OF ANY RAMP MEASURED PERPENDICULAR TO THE PEDESTRIAN TRAVEL DIRECTION IS A MINIMUM OF 36".

THERE ARE LOCAL JURISDICTIONS THAT SPECIFICALLY REQUIRE DETECTIBLE WARNINGS ON THE SIDE FLARES OR TOP OF RAMP (CA.). THERE ARE LOCAL IURISDICTIONS THAT HAVE REDEFINED DETECTIBLE WARNINGS (e.g. EXPOSED CONTRASTING COLOR AGGREGATE, GROOVES IN A PARALLEL OR DIAMOND PATTERN ETC.). ACCESSIBILITY GUIDLINES DEFINED BY LOCAL ORDINANCE SHOULD SUPERSEDE WHEN MORE STRINGENT THAN ADAAG. IN THE ABSENCE OF A DEFINITION, FOLLOW ADAAG.

TYPICAL ADA PARKING SPACE PLAN

A U.S. DEPARTMENT OF TRANSPORTATION R7-8 (RESERVED ACCESSIBLE ROUTE TO THE BUILDING ENTRANCE. PARKING) AND SUPPLEMENTAL SIGNS AS NOTED ABOVE MUST BE MOUNTED ON A PERMANENT POST NO LOWER THAN 60"/80" AS STATED IN THE SIGN DETAIL ABOVE. THE POST MUST BE MOUNTED IN THE CENTER OF THE 8 FOOT WIDE ACCESSIBLE PARKING SPACE, NO MORE THAN 5 FEET FROM THE FRONT OF THE PARKING SPACE. SEE ILLUSTRATION ABOVE.

EACH ACCESSIBLE PARKING SPACE IS TO BE A MINIMUM OF 8 FEET WIDE AND HAVE A 96" MINIMUM ACCESS AISLE FOR VANS OR 60" ACCESS AISLE FOR CARS ADJACENT TO THE SPACE. THE ACCESS AISLE MAY BE ON EITHER THE DRIVER'S SIDE OR THE PASSENGER'S SIDE OF THE ACCESSIBLE SPACE. THIS APPLIES TO 90° PARKING. IF ANGLED PARKING (ie. 45°,60°), ACCESS AISLE SHALL BE ON THE PASSENGER SIDE.

ACCESSIBLE PARKING SPACES ARE TO BE LOCATED AS CLOSE TO THE BUILDING ENTRANCE AS POSSIBLE AND SHALL BE IDENTIFIED

ACCESSIBLE PARKING SPACES AND ACCESS AISLES SHALL BE LEVEL WITH A SLOPE BETWEEN 1.5% AND 2% OR 1:50 IN ALL DIRECTIONS. THIS INCLUDES BOTH "RUNNING SLOPES" AND

EACH PARKING SPACE ACCESS AISLE MUST CONNECT TO A COMMON LEVEL WITH AN ACCESSIBLE ROUTE...I.E., EACH ACCESS AISLE NEXT TO A PARKING SPACE MUST HAVE A CURB RAMP AT SIDEWALK OR BLEND TO A LEVEL WALKWAY LEADING TO THE **ENTRANCE**

ACCESSIBLE PARKING ACCESS AISLES SHALL BE PART OF AN

THE ACCESS AISLE SHALL BE DESIGNATED WITH HIGH QUALITY YELLOW DIAGONAL SURFACE PAINT STRIPING OR PER LOCAL MUNICIPALITY'S REQUIREMENTS.

RAMPS MUST NOT EXTEND OUT FROM THE CURB INTO THE ACCESS AISLE OF ANY ACCESS PARKING SPACE.

ADA ALLOWS TWO PARKING SPACES TO SHARE AN ACCESS AISLE.
ACCESSIBLE SPACE REQUIREMENTS

TOTAL OFF STREET PARKING SPACES PROVIDED	NUMBER OF ACCESSIBLE PARKING SPACES REQUIRED
1 TO 25	
26 TO 50 51 TO 75	
76 TO 100	
101 TO 150	
151 TO 200	6
201 TO 300	7
301 TO 400	8
401 TO 500	9
501 TO 1000	2% OF TOTAL
OVER 1000	2% PLUS 1 FOR EACH 100 OVER 1000
HOSPITAL OUTPATIENT FACILITIES	10% OF TOTAL PATIENT & VISITOR PARKING SPACES
A REQUIRES ONE VAN ACCESSIBLE PARK	(ING SPACE IN EVERY SIX

 VAN ACCESSIBLE SPACES SHALL BE PERMITTED TO BE 8ft WIDE (MIN) WITH A 8ft WIDE (MIN) ACCESS AISLE

ACCESSIBLE SPACES, BUT NOT LESS THAN ONE.

 VAN ACCESSIBLE SPACES SHALL BE PERMITTED TO BE 11ft WIDE WITH A 5ft WIDE (MIN) ACCESS AISLE

ACCESSIBLE PARKING-SIZE AND MARKINGS

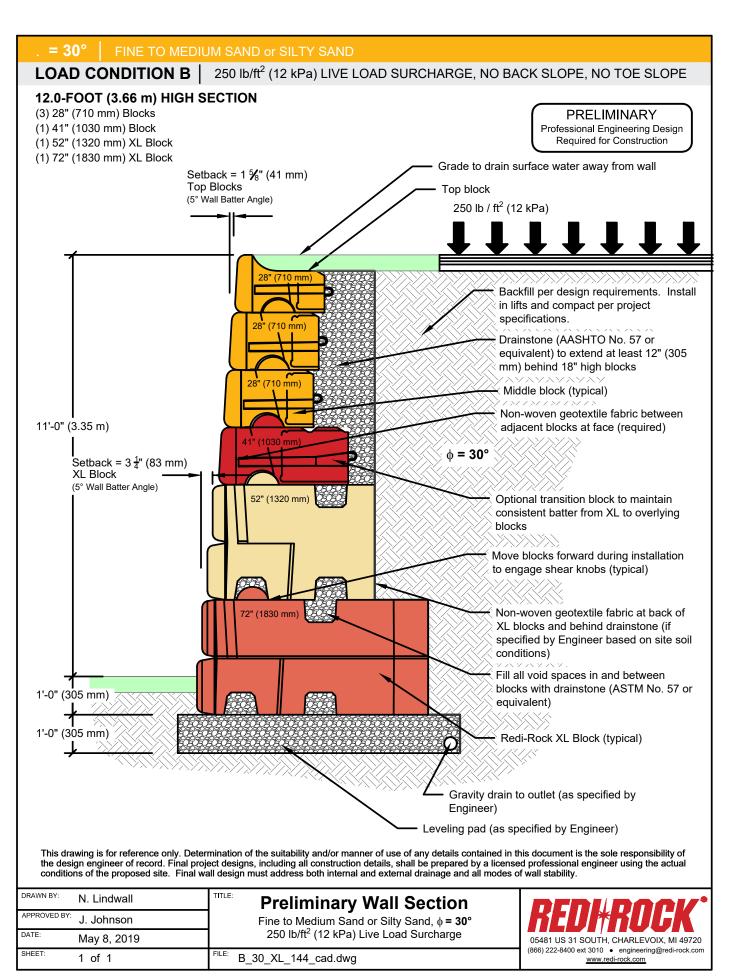
NOTES:
1. PAINTED CROSSWALKS SHALL BE WHITE 18" WIDE STRIPES 6' LONG, SPACED 36" ON CENTER

ACROSS THE ENTIRE LENGTH OF THE CROSSING. 2. PAINT 2" BLACK OUTLINE AROUND ARROWS AND LETTERS IN AREAS OF CONCRETE SURFACE.

3. PARKING SPACES ARE TO BE "WHITE" - 4" WIDE STRIPES

4. ADA SPACES, ADA MARKING, AND ADA ACCESS SPACE ARE TO BE "BLUE" - 4" WIDE STROKES.

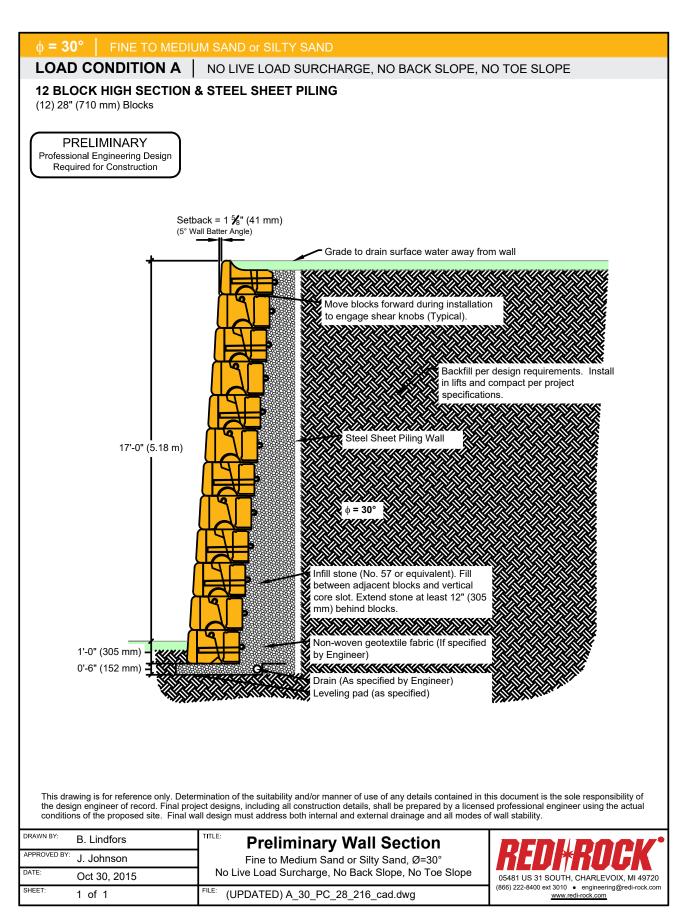
PAVEMENT MARKINGS



NOTES:

1. RETAINING WALL DETAILED DESIGN AND DRAWINGS TO BE PROVIDED BY WALL SUPPLIER.

PRELIMINARY DESIGN REDI ROCK RETAINING WALL ALONG WEST ST NORTH SIDE OF PROPERTY



NOTES:

1. SHEET PILING + BRICK RETAINING WALL DETAILED DESIGN AND DRAWINGS TO BE PROVIDED BY WALL SUPPLIER. PRELIMINARY DESIGN REDI ROCK & STEEL SHEET PILING RETAINING WALL EAST SIDE OF PROPERTY

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PROIECT NO. 22-0581

GENERAL STORM WATER MANAGEMENT NOTES

Soil erosion and sedimentation control shall protect against loss of soil by the action of water, ice and wind.

Erosion control shall be in accordance with City of Valparaiso Storm Water Ordinance & Storm Water Technical Manual & "The Indiana Storm Water Quality Manual".

There are two main elements for Storm Water Quality: Construction Site Stormwater Runoff Control and Post-Construction Stormwater Management. The contractor shall provide Construction Site Stormwater Runoff Control as required and construct the Post-Construction Stormwater Management features as shown on these plans.

The contractor shall be responsible for maintaining site conditions such that Stormwater Runoff Control is provided throughout construction. Surface water runoff management, ie: temporary ditches, swales, bypass pumping, and erosion control measures shall be constructed and maintained as required by construction activity and these items are considered incidental to the contract. These items shall be included in the base contract.

Upon the completion of the site work the contractor shall remove the Construction Site Stormwater Runoff Control measures and install the Post-Construction Stormwater Management measures.

Those Stormwater Runoff Control measures such as detention ponds that will also serve in the Post-Construction Stormwater Management Plan shall have construction sediment removed and full functionality restored upon the completion of the Site

Each Construction Site Stormwater Runoff Control measure shall be installed immediately following the construction of the structure or feature in which the measure is intended to protect.

The contractor is responsibile for any damage and/or cleaning to the structure or feature. Corrective work incurred by the contractor shall be considered incidental to the contract.

The contractor is responsibile for compliance with the S.W.P.P.P. Any fines or punative measures incurred by the project due to failure to comply with the S.W.P.P.P. are the responsibility of the contractor. These costs shall be considered incidental to the contract, and shall not be considered an extra.

During the course of construction the S.W.P.P.P. may require additional erosion control measures to be installed to address site specific items not anticipated by this plan due to construction schedule or sequencing. It is not the intent of this plan to direct the schedule or sequencing beyond the general construction sequence. Any stormwater runoff control measures required due to construction methodology, sequencing, etc. are incidental to the contract. Corrective work and maintenance shall also be considered incidental, and shall not be considered an extra.

All items shown on these detail sheets are standard details and describe standard installation practices. Not all of these Stormwater Runoff Control measures will be utilized. See the erosion control plan for location and types of erosion control measures utilized. The stormwater checklist document will serve to further outline the S.W.P.P.P. for this project and it is considered part of the plan documents. In the event that site conditions require additional or different erosion control measures, these details serve to describe some acceptable methods.

POTENTIAL CONSTRUCTION POLLUTANT SOURCES

Potential pollutants that could enter the stormwater during construction include exposed soils, fuel and oil from leaking heavy equipment and vehicles. Equipment has the potential to leak fuel throughout the disturbed areas, or wherever construction is occurring. The contractors will inspect equipment before initiating construction and routinely thereafter. If leaks are discovered, they will be repaired before the equipment is used or new equipment will be brought to the site.

Bulk Fuel storage on-site can leak and thereby be a pollutant. All Fuel storage tanks shall meet the minimum requirements of the Fuel Storage requirements.

Exposed soils also have potential for being eroded by water and wind and must be prevented from entering the stormwater system. The contractor will install silt fence, riprap, and ditch checks in areas designated on the site development plans.

MATERIAL HANDLING AND STORAGE

- Concrete wastewater liquid shall be fully evaporated prior to the planned capacity of the washout structure capacity being
- exceeded. Liquid must be disposed of offsite as wastewater.
- Concrete wastewater liquid that has not solidified may be pumped out into a secondary lined container or into a tanker and taken to an approved disposal facility. • Concrete wastewater shall not be allowed to leak onto the ground, run into storm drains, or into any body of water. Where
- washout wastewater leaks onto the ground, all contaminated soils shall be excavated and disposed of properly. Allow concrete wastes to set. Break up and properly dispose of hardened wastes. Upon removal of waste, inspect the structure.
- Do not wash sweepings from exposed aggregate concrete into the street or storm drain. Collect and return sweepings to
- aggregate base stockpile or dispose of in the trash. • Do not dump excess concrete onsite, except in designated areas.
- When concrete washout areas are no longer required, close the concrete washout systems. Dispose of all hardened concrete and other materials used to construct the system. Backfill, grade, and stabilize any holes, depressions, and other land disturbances

SOLID WASTE MANAGEMENT

- Select designated waste collection areas onsite.
- Inspect dumpsters for leaks and repair any dumpster that is not watertight.
- Dumpsters of sufficient size and number should be provided to contain the solid waste generated by the project. Provide containers with lids or covers that can be placed over the container to keep rain out or to prevent loss of wastes when it is
- Full dumpsters should be removed from the project site and the contents should be disposed of by the trash hauling contractor. Plan for additional containers and more frequent pickup during the demolition phase of construction.
- Collect site trash daily, especially during rainy and windy conditions.
- Make sure that toxic liquid wastes (used oils, solvents, and paints) and chemicals (acids, pesticides, additives, curing compounds) are not disposed of in dumpsters designated for construction debris.
- Do not hose out dumpsters on the construction site. Leave dumpster cleaning to the trash hauling contractor.
- Arrange for regular waste collection before containers overflow. Clean up immediately if a container does spill.
- Make sure that construction waste is collected, removed, and disposed of only at authorized disposal areas.
- Litter from work areas within the construction limits of the project site should be collected and placed in watertight dumpsters at least weekly, regardless of whether the litter was generated by the contractor, the public, or others. Collected litter and
- not be placed in or next to drain inlets, stormwater drainage systems, or watercourses. • Construction debris and waste should be removed from the site biweekly or more frequently as needed.
- Construction material visible to the public should be stored or stacked in an orderly manner.
- Stormwater run-on should be prevented from contacting stored solid waste through the use of berms, dikes, or other temporary diversion structures or through the use of measure to elevate waste from site surfaces.
- Solid waste storage areas should be located at least 50 ft. from drainage facilities and watercourses and should not be located
- in area prone to flooding or ponding. Inspect construction waste area weekly.
- CHEMICALS AND LIQUIDS STORAGE AND HANDLING
- Store materials in manufacturer's containers.
- Maintain Safety Data Sheets (SDS) on all products • Store materials in a weatherproof/vandal resistant locker or building. Keep materials away from flammable sources.
- Follow manufacturer's instructions for the proper use and storage of all materials. • Do not perform washing of applicators or containers of solvent, paint, grout, stucco, or other materials near or into a waterway
- or stormwater inlet. Wash water is to be disposed offsite as wastewater
- Tightly seal and store paint containers and curing compounds when not required for use. • Do not discharge excess paint to a waterway or storm system. Properly dispose of excess paint according to the manufacturer's
- instructions and in accordance with all Federal, State, and local regulations. • Provide secondary containment for aboveground storage tanks or storage areas containing hazardous materials that are located
- Remove collected liquid in the secondary containment area within 72 hours of its discovery to maintain the capacity.

- Apply fertilizers only in the minimum amounts recommended by the manufacturer, as indicated from a soil test, or per the Indiana Stormwater Quality Manual.

Properly dispose of contaminated wash water.

- Work fertilizers into the soil to limit exposure to stormwater. Do not apply immediately prior to precipitation events.
- Store fertilizers in a covered area and transfer partially used bags to a sealable container to avoid spills.

Use a dedicated site for washing. Locate wash areas at least 50 feet from stormwater inlets or water bodies.

Equipment and Vehicle Washing

- As feasible, perform washing offsite in a covered facility with an impervious floor and drains connected to the sanitary sewer.
- Do not discharge wash water if using soaps, solvents, or detergents. Only non-contaminated wash water may be discharged to
- Inspect equipment and vehicles for leaks or worn hoses prior to washing.

CONSTRUCTION SITE STORMWATER RUNOFF CONTROL SUMMARY OF BASIC PRINCIPLES

- 1. Keep disturbed area as small as possible.
- 2. Stabilize and/or protect disturbed areas as soon as possible.
- 3. Keep storm water runoff velocities low.
- 4. Retain sediment within immediate construction area.

The purpose of this plan is to specify methods for construction site stormwater runoff control.

All soil erosion and sedimentation control devices shall be regularly maintained by the contractor through the duration of the project. Collected silt and sedimentation shall be removed as required to maintain the effectiveness of the silt traps or sedimentation control devices. The contractor shall replace filter materials which have become ineffective due to contamination or physical deterioration. The contractor shall inspect all stormwater runoff control devices weekly and after

The contractor shall have a log of maintenance and inspections, to be available at the site upon request of Local and State

If possible no grubbing should take place within 30' of an active watercourse.

GENERAL CONSTRUCTION SEQUENCE

- Installation/implementation of storm water quality measures
- Site Clearing/demolition activities.
- Topsoil removal and stockpiling.
- Mass grading.
- Installation of underground utilities.
- Construction of dry-bottom storm water pond.
- Installation of curb and sidewalk.
- Construction of asphalt.
- Final grading.
- Permanent seeding/sod.

STORMWATER QUALITY CONSTRUCTION SEQUENCE

- The sequence of when each measure will be implemented is summarized below.
- Post signed CSGP NOI, NPDES Permit number, CSGP NOS (when available), contact information for the site, municipal stormwater permit, and location where construction plans may be obtained in a visible location at entrance to site.
- Construct gravel construction entrance from the street to the building pad prior to construction.
- Install silt fence/fiber rolls prior to construction at construction limits.
- Construct refueling area and concrete washout area prior to construction.
- Install inlet protection at all inlets on property.
- Perform topsoil removal and stockpiling. Soil stockpiles created on site to be protected from erosion with silt fence around the base.
- Perform mass grading of the site subgrade.
- Construct dry-bottom storm water pond to help provide the required storage needed to capture and treat storm water
- Establish permanent seeding on banks of pond to prevent the banks from degrading.
- Establish temporary seeding of diversion swales.
- Install pipe outlet/outfall from storm water pond to roadside ditch.
- Establish connection between new storm sewer and existing storm sewer.
- Install underground utilities.
- Establish temporary seeding and straw mulch on disturbed areas within 14 days.
- Re-seed any areas disturbed by construction and utilities installation with temporary seed mix within 3 days of completion of disturbance.
- · Grade site to final elevations.
- Install curb and sidewalk.
- Construct asphalt.
- Install permanent seeding or sod.
- Maintain temporary erosion control features until construction is complete.
- Remove temporary erosion control measures once permanent vegetative cover has been established.
- Submit the the Notice of Termination for the Construction Stormwater General (CSGP) permit.
- See attached details for acceptable erosion and sedimentation control installation methods.

TYPES OF CONTROL DEVICES

The Construction Site Stormwater Runoff Control Plan involves the use of four types of control devices to manage runoff thereby assuring that runoff meets the current requirements for stormwater quality.

1. Erosion Control

- a. Chemical Stabilization b. Geotextiles
- c. Scour Stop d. Riprap
- e. Mulching f. Soil Roughening
- g. Topsoil Utilization h. Seeding i. Sodding
- 2. Runoff Control
- a. Check Dams b. Temporary Diversion Dikes
- c. GeoRidge Ditch Berms
- 3. Sediment Control a. Polymer Systems (Floc Logs)
- b. Fiber Rolls c. Sediment Basins
- d. Dewatering Bags e. Silt Fence
- f. Storm Drain Inlet Protection
- g. Construction Entrances h. Construction Entrance Mud Mats
- 4. Material Management (housekeeping) a. Concrete Washouts b. Spill Prevention and Control Plan
- c. Fuel Storage d. Stockpiles
- e. Temporary Facilities f. Material Handling and Storage

SELF MONITORING PROGRAM

binder of the weekly forms shall be kept and available upon request.

The contractor shall perform inspections weekly and after each storm event of 0.5" or more throughout the construction process for all Construction Site Stormwater Runoff Control measures.

See the Maintenance Section under each measure, or follow the manufacturers recommendations for routine

The attached self monitoring form shall be used to monitor the Construction Site Stormwater Runoff Control measures. A

The contractors will inspect equipment before initiating construction and routinely thereafter to assure that mechanical equipment is not polluting the stormwater runoff.

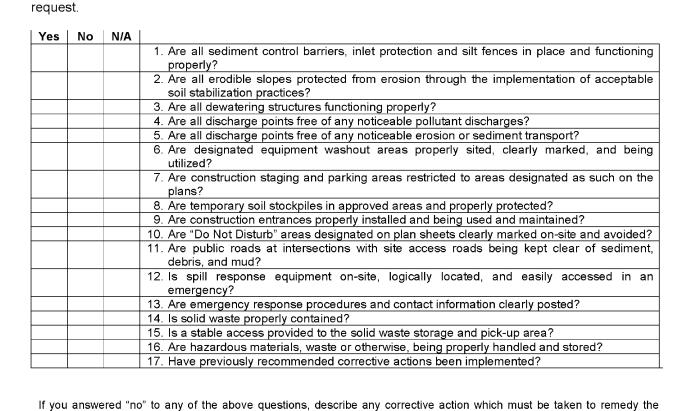
SELF MONITORING FORM



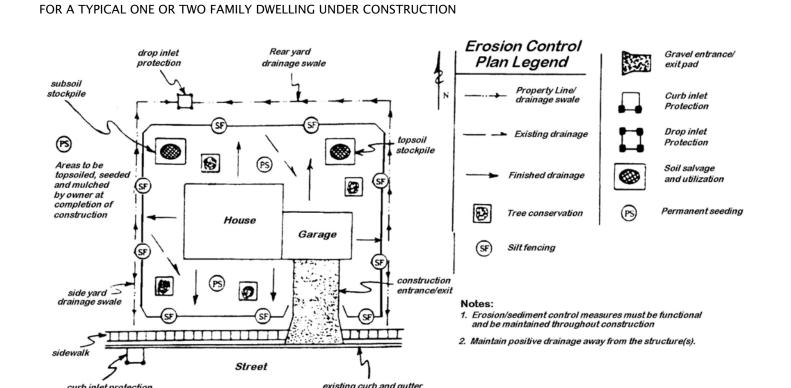
problem and when the corrective actions are to be completed

CONSTRUCTION SITE INSPECTION AND MAINTENANCE LOG (To be Completed by Property Owner or Agent)

All stormwater pollution prevention BMPs shall be inspected and maintained as needed to ensure continued performance of their intended function during construction and shall continue until the entire site has been stabilized and a Notice of Termination has been issued. An inspection of the project site must be completed by the end of the next business day following each measurable storm event. If there are no measurable storm events within a given week, the site should be monitored at least once in that week. Maintenance and repair shall be conducted in accordance with the accepted site plans. This log shall be kept as a permanent record and must be made available to the Municipal Engineer, in an organized fashion, within forty-eight (48) hours upon



SAMPLE EROSION/SEDIMENT CONTROL PRACTICE PLAN



POST-CONSTRUCTION STORMWATER MANAGEMENT PLAN

- After construction is completed, including buildings, parking lots constructed, and landscaping, the property owner will take possession of the property. When the property becomes occupied, it is no longer the responsibility of the developer to maintain the site. The responsibility for maintaining the permanent erosion and sediment control measures belongs to the current owner/s of the property. Pollutants associated with the proposed land use will most likely be very typical of commercial/retail developments. Most expected pollutants will be associated with automobiles: oil, grease, antifreeze, brake dust, rubber fragments, gasoline, diesel fuel, metals, and improper disposal of trash. It is the responsibility of the property owner/s or owners association to provide routine maintenance. Some maintenance items may include trimming vegetation, picking up litter, monitoring and cleaning catch basins, pond outlet structure and culverts. The sediment control basins protecting the stormwater quality of the site will require periodic cleaning of sediments that accumulate. After vegetation has been established, temporary erosion and sediment control measures such as silt fence and straw bales will be removed by the installing contractor.
- The plans make use of a detention pond system and green space to control the pollutants that occur after construction activities conclude.
- The post-construction stormwater quality measures will be installed as a part of the normal construction activities for the site. They shall be fully operational, and complete at the completion of construction.
- All storm water run-off shall be controlled by restrictors in the outfall pipes constructed as part of these engineering plans. The stormwater quality measures shall minimize the pollutants from stormwater run-off and therefore minimize adverse impacts to the receiving streams and riparian habitats.
- Green spaces The green space areas of the site should receive routine fertilizing, watering, mowing and trimming to maintain a healthy landscape.
- Catch basins Catch basins should be routinely inspected for build up of sediment. Mechanical cleaners or hand cleaning will be required to maintain the function of the catch basin.
- Storm drain flushing In the event that the storm drains cease to function properly due to excessive sediment buildup, flushing of the storm drains may be required.
- Trees
- Native re-vegetation
- Pre-cast Storm Drain Covers
- Grass swales Grass swales should receive routine fertilizing, watering, mowing and trimming to maintain a healthy

DVG Team Inc. has prepared this erosion and sedimentation control plan for the owner/developer in

for compliance with this erosion and sedimentation control plan and the related attachments by all

Plan. Any additional erosion or sediment control measures beyond those specified in this plan, for

unforeseen or unexpected situations, which may be required by the regulatory agencies shall be the

subcontractors and consultants that perform work on the project site. The owner/developer is

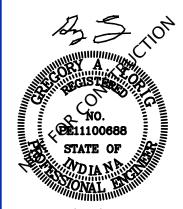
responsibility of the owner/developer to implement.

accordance with the known requirements and ordinances. It is the responsibility of the owner/developer

responsible for the routine inspection and maintenance of the erosion and sediment control measures.

DVG Team Inc. is not responsible for the enforcement or compliance of the Erosion and Sediment Control

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EROSION CONTROL MEASURES CHEMICAL STABILIZATION

SOFT PIABLE MATTING SUCH AS JUTE, COIR OR BURLAP, APPLIED POLYMER SYSTEMS, "SILT STOP" DRY POWER (OR APPROVED MATERIAL:

"SILT STOP" DRY POWDER IS A SOIL-SPECIFIC MATERIAL. A SOIL SAMPLE MUST BE SUBMITTED TO THE MANUFACTURER TO COVERAGE: DETERMINE PROPER APPLICATION RATES.

INSTALLATION:

1. PREPARE THE SITE BY FILLING IN GULLIES, RILLS AND LOW SPOTS. APPLY "SILT STOP" POWER (DRY) OVER DRY GROUND WITH A SEED/FERTILIZER SPREADER.

SELECT THE TYPE AND WEIGHT OF EROSION CONTROL BLANKET TO FIT THE SITE CONDITIONS (e.g. SLOPE, CHANNEL AND FLOW VELOCITY).

DURING VEGETATIVE ESTABLISHMENT, INSPECT AFTER STORM EVENTS FOR ANY EROSION. IF ANY AREA SHOWS EROSION, REPAIR THE GRADE AND RE-APPLY "SILT STOP" POWDER AND RE-LAY AND STAPLE

3. AFTER VEGETATIVE ESTABLISHMENT, CHECK THE TREATED AREA PERIODICALLY.

GEOTEXTILES

NORTH AMERICAN GREEN - SC 150 or DS 150 BLANKET SC 150 WHEN PLACEMENT OCCURS IN THE FALL/WINTER AND WHEN DURABILITY IS REQUIRED DS 150 DEGRADES MORE RAPIDLY, ALLOWING FOR SOONER MOWING OF THE STABILIZED AREA

EROSION CONTROL BLANKET (SURFACE-APPLIED)

STAPLES AS RECOMMENDED BY THE MANUFACTURER. FOR NORTH AMERICAN GREEN, USE STAPLE PATTERN "B". SEE CHART

INSTALLATION:

1. SELECT THE TYPE AND WEIGHT OF EROSION CONTROL BLANKET TO FIT THE SITE CONDITIONS (e.g. SLOPE, CHANNEL

INSTALL ANY PRACTICES NEEDED TO CONTROL EROSION AND RUNOFF, SUCH AS TEMPORARY OR PERMANENT DIVERSION, SEDIMENT BASIN OR TRAP, SILT FENCE, AND/OR STRAW BALE DAM.

GRADE THE SITE AS SPECIFIED IN THE CONSTRUCTION PLAN.

ADD TOPSOIL WHERE APPROPRIATE. PREPARE THE SEEDBED, FERTILIZE (AND LIME IF NEEDED) AND SEED THE AREA IMMEDIATELY AFTER GRADING.

FOLLOW MANUFACTURER'S DIRECTIONS AND LAY THE BLANKETS ON THE SEEDED AREA SUCH THAT THEY ARE IN

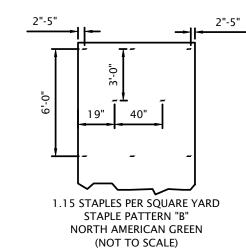
CONTINUOUS CONTACT WITH THE SOIL AND THAT THE UPSLOPE OR UPSTREAM ONES OVERLAP THE LOWER ONES BY

7. TUCK THE UPPERMOST EDGE OF THE UPPER BLANKETS INTO A CHECK SLOT (SLIT TRENCH), BACKFILL WITH SOIL, AND TAMP DOWN

8. ANCHOR THE BLANKETS AS SPECIFIED BY THE MANUFACTURER.

DURING VEGETATIVE ESTABLISHMENT, INSPECT AFTER STORM EVENTS FOR ANY EROSION BELOW THE BLANKET. IF ANY AREA SHOWS EROSION, PULL BACK THAT PORTION OF THE BLANKET COVERING IT, ADD SOIL, RE-SEED THE

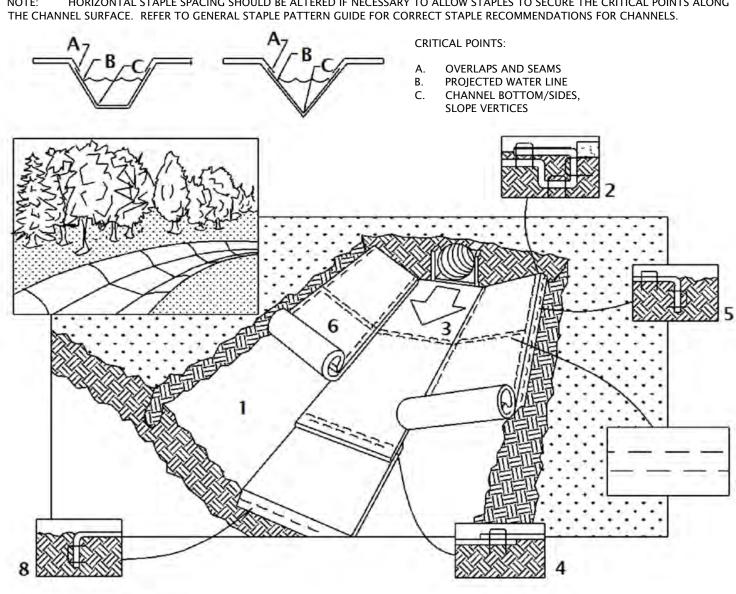
AREA, AND RE-LAY AND STAPLE THE BLANKET. 3. AFTER VEGETATIVE ESTABLISHMENT, CHECK THE TREATED AREA PERIODICALLY



EROSION CONTROL BLANKET (CHANNEL APPLICATION)

DETAIL SOURCE: NORTH AMERICAN GREEN

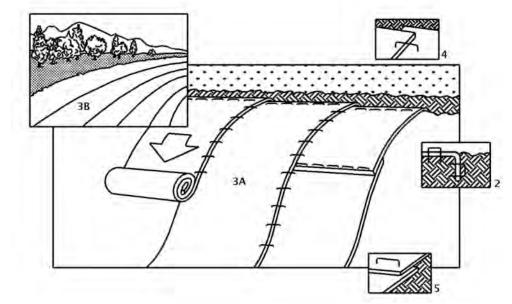
HORIZONTAL STAPLE SPACING SHOULD BE ALTERED IF NECESSARY TO ALLOW STAPLES TO SECURE THE CRITICAL POINTS ALONG



- PREPARE SOIL BEFORE INSTALLING BLANKETS, INCLUDING APPLICATION OF LIME, FERTILIZER AND SEED. BEGIN AT THE TOP OF THE CHANNEL BY ANCHORING THE BLANKET IN A 6-INCH DEEP BY 6-INCH WIDE TRENCH, BACKFILL AND
- COMPACT THE TRENCH AFTER STAPLING. ROLL CENTER BLANKET IN DIRECTION OF WATER FLOW ON BOTTOM OF CHANNEL.
- 4. PLACE BLANKETS END OVER END (SHINGLE-STYLE) WITH A 6-INCH OVERLAP. USE A DOUBLE ROW OF STAGGERED STAPLES 4 INCHES
- FULL LENGTH EDGE OF BLANKETS AT THE TOP OF SIDE SLOPES MUST BE ANCHORED IN 6-INCH DEEP BY 6-INCH WIDE TRENCH. BACKFILL AND COMPACT THE TRENCH AFTER STAPLING.
- 6. BLANKETS ON SIDE SLOPES MUST BE OVERLAPPED 4 INCHES OVER THE CENTER OF BLANKET AND STAPLED (2 INCHES FOR C350
- 7. IN HIGH FLOW CHANNEL APPLICATIONS, A STAPLE CHECK SLOT IS RECOMMENDED AT 30 FT. TO 40 FT. INTERVALS. USE A ROW OF STAPLES 4 INCHES APART OVER ENTIRE WIDTH OF CHANNEL. PLACE A SECOND ROW 4 INCHES BELOW THE FIRST ROW IN A STAGGERED
- 8. THE TERMINAL END OF THE BLANKETS MUST BE ANCHORED IN A 6-INCH DEEP BY 6-INCH WIDE TRNECH. BACKFILL AND COMPACT THE TRENCH AFTER STAPLING.

EROSION CONTROL BLANKET (SIDE SLOPE APPLICATION)

DETAIL SOURCE: NORTH AMERICAN GREEN



REFER TO GENERAL STAPLE PATTERN GUIDE FOR CORRECT STAPLE RECOMMENDATIONS FOR CHANNELS.

- DIRECTIONS PREPARE SOIL BEFORE INSTALLING BLANKETS INCLUDING APPLICATION OF LIME, FERTILIZER AND SEED. WHEN USING CELL-O-SEED, DO NOT SEED PREPARED AREA. CELL-O-SEED MUST BE INSTALLED WITH PAPER SIDE DOWN.
- BEGIN AT THE TOP OF THE SLOPE BY ANCHORING THE BLANKET 6-INCHEDEEP BY 6-INCH WIDE TRENCH. BACKFILL AND COMPACT THE TRENCH AFTER STAPLING
- ROLL THE BLANKETS DOWN OR HORIZONTALLY ACROSS THE SLOPE. THE EDGES OF PARALLEL BLANKETS MUST BE STAPLED WITH AN APPROXIMATELY 2-INCH OVERLAP.
- WHEN BLANKETS MUST BE SPLICED DOWN THE SLOPE, PLACE BLANKETS END OVER END (SHINGLE-STYLE) WITH AN APPROXIMATELY 4-INCH OVERLAP. STAPLE THROUGH OVERLAPPED AREA, APPROXIMATELY 12 INCHES APART.

RIP RAP AT PIPE OUTLET

FIRST AND AVOID MIXING THE LAYERS.

HARD, ANGULAR AND WEATHER-RESISTANT, HAVING A SPECIFIC GRAVITY OF AT LEAST 2.5 MATERIAL: GRADATION: WELL-GRADED STONE, 50% (BY WEIGHT LARGER THAN THE SPECIFIED d50; HOWEVER, THE LARGEST PIECES SHOULD NOT EXCEED TWO TIMES THE SPECIFIED d50 AND NO MORE THAN 15% OF THE PIECES (BY WEIGHT) SHOULD BE LESS THAN 3

FILTER: USE GEOTEXTILE FABRIC FOR STABILIZATION AND FILTRATION OR SAND/GRAVEL LAYER PLACED UNDER ALL PERMANENT RIP 2:1 OR FLATTER, UNLESS APPROVED IN THE EROSION AND SEDIMENT CONTROL PLAN

SUBGRADE PREPARATION

- REMOVE BRUSH, TREES, STUMPS AND OTHER DEBRIS. EXCAVATE ONLY DEEP ENOUGH FOR BOTH FILTER AND RIP RAP. OVER-EXCAVATION INCREASES THE AMOUNT OF
- COMPACT ANY FILL MATERIAL TO THE DENSITY OF THE SURROUNDING UNDISTURBED SOIL SMOOTH THE GRADED FOUNDATION.

SPOIL CONSIDERABLY.

FILTER PLACEMENT

1. IF USING GEOTEXTILE FABRIC, PLACE IT ON THE SMOOTHED FOUNDATION, OVERLAP THE EDGES AT LEAST 12 INCHES

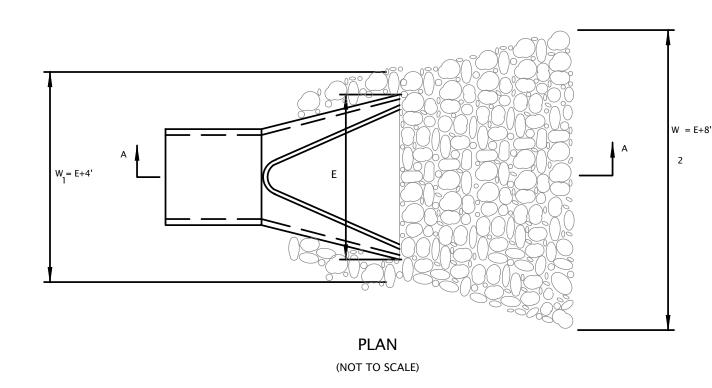
AND SECURE WITH ANCHOR PINS SPACED EVERY 3 FEET ALONG THE OVERLAP. 2. IF USING A SAND/GRAVEL FILTER, SPREAD THE WELL-GRADED AGGREGATE IN A UNIFORM LAYER TO THE REQUIRED THICKNESS (6 INCHES MINIMUM); IF TWO OR MORE LAYERS ARE SPECIFIED, PLACE THE LAYER OF SMALLER GRADATION

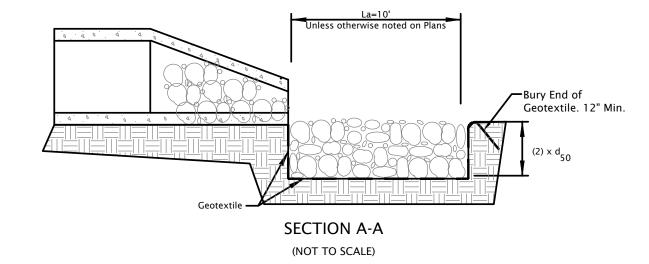
RIP RAP PLACEMENT

- 1. IMMEDIATELY AFTER INSTALLING THE FILTER, ADD THE RIP RAP TO FULL THICKNESS IN ONE OPERATION. DO NOT DUMP THROUGH CHUTES OR USE ANY METHOD THAT CAUSES SEGREGATION OF ROCK SIZES OR THAT WILL DISLODGE
- OR DAMAGE THE UNDERLYING FILTER MATERIAL 2. IF FABRIC IS DAMAGED, REMOVE THE RIP RAP AND REPAIR BY ADDING ANOTHER LAYER OF FABRIC, OVERLAPPING THE
- PLACE SMALLER ROCK IN VOIDS TO FORM A DENSE, UNIFORM AND WELL-GRADED MASS. SELECTIVE LOADING AT THE
- QUARRY AND SOME HAND PLACEMENT MAY BE NEEDED TO ENSURE AN EVEN DISTRIBUTION OF ROCK MATERIAL. BLEND THE ROCK SURFACE SMOOTHLY WITH THE SURROUNDING AREA TO ELIMINATE PROTRUSIONS OR OVER-FALLS

MAINTENANCE

INSPECT PERIODICALLY FOR DISPLACED ROCK MATERIAL, SLUMPING AND EROSION AT EDGES, ESPECIALLY DOWN-STREAM OR DOWN-SLOPE.



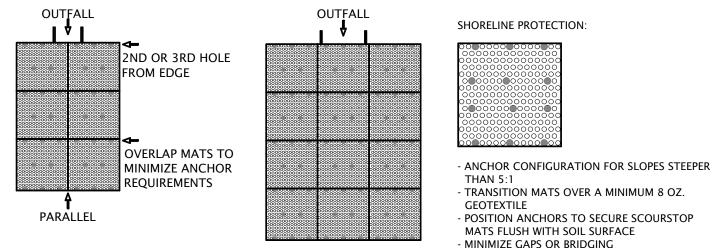


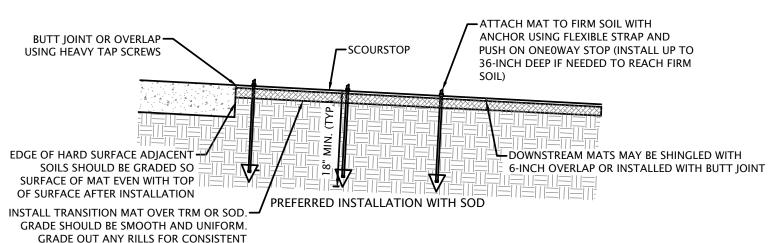
SCOURSTOP TRANSITION MAT FOR SCOUR PROTECTION

SCOUR STOP TRANSITION MATS MATERIAL: WH SHURTLEFF COMPANY 11 WALLACE AVENUE SOUTH PORTLAND, ME 04106 PUSH ON ONE-WAY STOP (800) 663-6149 —WASHER (>2.5" DIA.) WWW.WHSHURTLEFF.COM TRANSITION MAT (CFS) WIDTH×LENGT METAL SPADE

ANCHOR REQUIREMENTS*: FIRST ROW OF SCOURSTOP MATS MINIMUM OF 8 ANCHORS SECTION ROW OF SCOURSTOP MATS * TO ENSURE CONSISTENT CONTACT WITH THE SOIL, EXCEED THE MINIMUM ANCHOR REQUIREMENT AT INSTALLATION OR IMPROVE SOIL

SURFACE SMOOTHNESS





SOIL STRUCTURE PRIOR TO INSTALLATION NOT TO SCALE

INSTALLATION TO BE COMPLETED IN ACCORDANCE WITH MANUFACTURERS' SPECIFICATIONS. DO NOT SCALE DRAWINGS

RIP-RAP FOR SCOUR PROTECTION

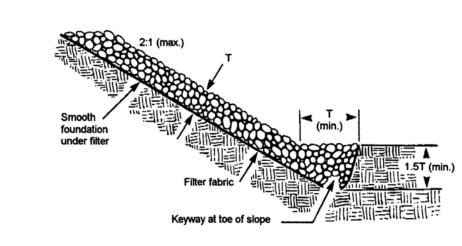
MATERIAL HARD, ANGULAR AND WEATHER-RESISTANT, HAVING A SPECIFIC GRAVITY OF AT LEAST 2.5 GRADATION: WELL-GRADED STONE, 50% (BY WEIGHT LARGER THAN THE SPECIFIED d50; HOWEVER, THE LARGEST PIECES SHOULD NOT EXCEED TWO TIMES THE SPECIFIED d50 AND NO MORE THAN 15% OF THE PIECES (BY WEIGHT) SHOULD BE LESS

FILTER: USE GEOTEXTILE FABRIC FOR STABILIZATION AND FILTRATION OR SAND/GRAVEL LAYER PLACED UNDER ALL PERMANENT RIP RAP INSTALLATIONS.

2:1 OR FLATTER, UNLESS APPROVED IN THE EROSION AND SEDIMENT CONTROL PLAN. MINIMUM THICKNESS: TWO TIMES THE SPECIFIED d50 STONE DIAMETER

SUBGRADE PREPARATION

- REMOVE BRUSH, TREES, STUMPS AND OTHER DEBRIS. EXCAVATE ONLY DEEP ENOUGH FOR BOTH FILTER AND RIP RAP. OVER-EXCAVATION INCREASES THE AMOUNT OF
- COMPACT ANY FILL MATERIAL TO THE DENSITY OF THE SURROUNDING UNDISTURBED SOIL.
- CUT KEYWAY IN STABLE MATERIAL AT THE BASE OF THE SLOPE TO REINFORCE TOE. KEYWAY DEPTH SHOULD BE 1.5 TIMES THE DESIGN THICKNESS OF THE RIP RAP AND SHOULD EXTEND A HORIZONTAL DISTANCE EQUAL TO THE DESIGN THICKNESS.
- SMOOTH THE GRADED FOUNDATION



FILTER PLACEMENT

- 1. IF USING GEOTEXTILE FABRIC, PLACE IT ON THE SMOOTHED FOUNDATION, OVERLAP THE EDGES AT LEAST 12 INCHES AND SECURE WITH ANCHOR PINS SPACED EVERY 3 FEET ALONG THE OVERLAP.
- 2. IF USING A SAND/GRAVEL FILTER, SPREAD THE WELL-GRADED AGGREGATE IN A UNIFORM LAYER TO THE REQUIRED THICKNESS (6 INCHES MINIMUM); IF TWO OR MORE LAYERS ARE SPECIFIED, PLACE THE LAYER OF SMALLER GRADATION FIRST AND AVOID MIXING THE LAYERS.

RIP RAP PLACEMENT

- IMMEDIATELY AFTER INSTALLING THE FILTER, ADD THE RIP RAP TO FULL THICKNESS IN ONE OPERATION. DO NOT DUMP THROUGH CHUTES OR USE ANY METHOD THAT CAUSES SEGREGATION OF ROCK SIZES OR THAT WILL DISLODGE OR DAMAGE THE UNDERLYING FILTER MATERIAL
- IF FABRIC IS DAMAGED, REMOVE THE RIP RAP AND REPAIR BY ADDING ANOTHER LAYER OF FABRIC, OVERLAPPING THE 3. PLACE SMALLER ROCK IN VOIDS TO FORM A DENSE, UNIFORM AND WELL-GRADED MASS. SELECTIVE LOADING AT THE
- QUARRY AND SOME HAND PLACEMENT MAY BE NEEDED TO ENSURE AN EVEN DISTRIBUTION OF ROCK MATERIAL. 4. BLEND THE ROCK SURFACE SMOOTHLY WITH THE SURROUNDING AREA TO ELIMINATE PROTRUSIONS OR OVER-FALLS.

MAINTENANCE

INSPECT PERIODICALLY FOR DISPLACED ROCK MATERIAL, SLUMPING AND EROSION AT EDGES, ESPECIALLY DOWN-STREAM OR DOWN-SLOPE.

SILT FENCE

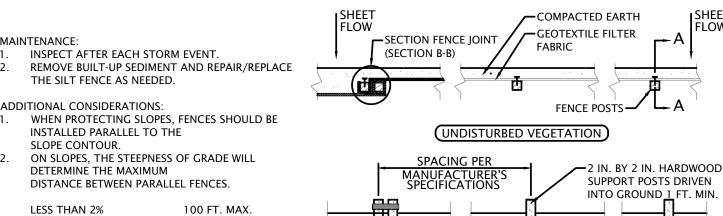
POOL AREA FLAT (LESS THAN 1% SLOPE), WITH SEDIMENT STORAGE OF 945 CU.FT./ACRE DISTURBED. ECONOMY BLUE STRIPE SILT FENCE WITH POSTS, MANUFACTURED BY MIDWEST CONSTRUCTION PRODUCTS AT (800) 532-2381 OR APPROVED EQUAL.

ANCHORING: 2 INCH BY 2 INCH HARDWOOD STAKES WITH A LENGTH EQUAL TO THE HEIGHT OF THE SILT FENCE PLUS 1 FOOT.

INSTALLATION:

DRIVE STAKES 1 FT. (MINIMUM) INTO GROUND AND ATTACH FABRIC TO STAKES WITH STAPLER.

BOTTOM OF FABRIC SHALL BE PLACED UNDER 6 INCHES COMPACTED SOIL TO PREVENT SEDIMENT FLOW UNDERNEATH THE FENCE. ENSURE THAT ALL SUPPORTING POSTS ARE ON THE DOWN SLOPE SIDE OF THE FENCING.



GEOTEXTILE FILTER BETWEEN 2% AND 5% 75 FT. MAX. **GREATER THAN 55 ADDITIONAL** SURFACE STABILIZATION SHALL BE PROVIDED GEOTEXTILE FILTER FABRIC FASTENED ON UPHILL SIDE, SUPPORT WIRE

TOWARDS EARTH DISRUPTION RIDGE OF COMPACTED EARTH UNDISTURBED -ON UPHILL SIDE OF FILTER FABRIC VEGETATION ----- SHEET FLOW FABRIC TO BE WRAPPED AROUND FENCE POST **SECTION A-A SECTION B-B**

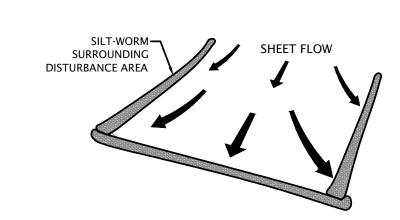
(NOT TO SCALE)

SILT-WORM

SILT-WORM OR APPROVED EQUAL DIAMETER: 9 INCHES MINIMUM

PERIMETER CONTROL

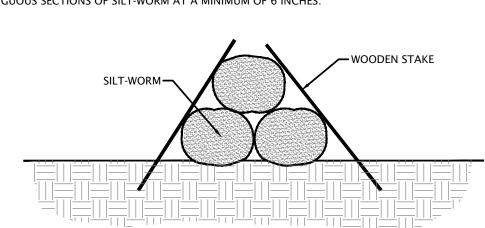
PLACE SILT-WORM DIRECLY ON TOP OF GRADE FOR GRADES UNDER 12%. ARRANGE PERIMETER CONTROL IN A MANNER THAT IS APPLIED PERPENDICULAR TO SHEET FLOW. OVERLAP CONTIGUOUS SECTIONS OF SILT WORM AT A MINIMUM OF 6 INCHES.



STACKING

INSTALLATION: PLACE SILT-WORM DIRECTLY ON TOP OF GRADE FOR GRADES UNDER 12%.

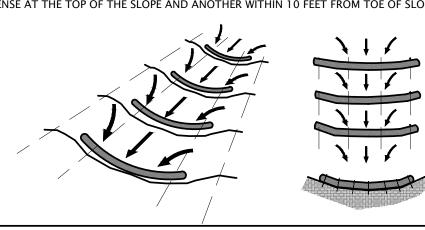
STACK SILT-WORM IN A STAGGERED MANNER, AS SHOWN BELOW. OVERLAP CONTIGUOUS SECTIONS OF SILT-WORM AT A MINIMUM OF 6 INCHES



SLOPE INTERRUPTION / DITCH CHECK

INSTALLATION: PLACE SILT-WORM PERPENDICULAR TO SHEET FLOW AND CURL ENDS UP TOWARD TOP OF SLOPE.

STAKE THE SILT-WORM EVERY 4 FEET AND OVERLAP THE ENDS BETWEEN 1 AND 2 FEET. PLACE A LINE OF DEFENSE AT THE TOP OF THE SLOPE AND ANOTHER WITHIN 10 FEET FROM TOE OF SLOPE.



	SPACIN	G FOR SLOPE APPLIC	CATION	
SLOPE	9-inch	12-inch	18-inch	24-inch
2% or less	70 ft.	80 ft.	N/A	N/A
5%	30 ft.	60 ft.	80 ft.	N/A
10%	20 ft.	30 ft.	70 ft.	80 ft.
6:1	N/A	20 ft.	40 ft.	55 ft.
4:1	N/A	20 ft.	30 ft.	30 ft.
3:1	N/A	N/A	20 ft.	25 ft.
2:1	N/A	N/A	20 ft.	20 ft.

SILT-WORM MAINTENANCE GUIDELINES

INSPECT WITHIN 24 HOURS OF A RAIN EVENT AND AT LEAST ONCE EVERY 7 CALENDAR DAYS.

SEDIMENT DEPOSITS, GRADE THE SITE TO BLEND WITH THE SURROUNDING AREA, AND STABILIZE.

 IF SILT-WORM TEARS, STARTS TO DECOMPOSE, OR IN ANY WAY BECOMES INEFFECTIVE, REPLACE THE AFFECTED PORTION IMMEDIATELY. NOTE: ALL REPAIRS SHOULD MEET SPECIFICATIONS AS OUTLINED WITHIN THIS MEASURE.

 REMOVE DEPOSITED SEDIMENT WHEN IT IS CAUSING THE SILT-WORM TO BULGE OR WHEN IT REACHES ONE-HALF THE HEIGHT OF THE SILT-WORM AT ITS LOWEST POINT. WHEN CONTRIBUTING DRAINAGE AREA HAS BEEN STABILIZED, REMOVE THE SILT-WORM AND

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EROSION CONTROL MEASURES (continued) MULCHING

MATERIAL: STRAW, HAY, WOOD FIBER, CELLULOSE

OR EXCELSIOR OR EROSION CONTROL BLANKETS

OR TURF REINFORCEMENT MATS, AS SPECIFIED IN THE EROSION AND SEDIMENT CONTROL PLAN

AT LEAST 75% OF THE SOIL SURFACE COVERAGE

REQUIRED FOR STRAW OR HAY MULCH AND SOMETIMES EXCELSIOR TO PREVENT DISPLACEMENT BY WIND AND/OR WATER

MATERIAL	RATE	COMMENTS
STRAW OR HAY	1.5 TO 2 TONS/ACRE	SHOULD BE DRY, UNCHOPPED, FREE OF UNDESIRABLE
		SEEDS SPREAD BY HAND OR ANCHORED
		MUST BE CRIMPED OR ANCHORED
WOOD FIBER OF CELLULOSE	1 TON/ACRE	APPLY WITH A HYDROMULCHER AND USE WITH TACKING AGENT
LONG FIBER WOOD (EXCELSIOR)	0.5 TO 0.75 TON/ACRE	ANCHOR IN AREAS SUBJECT TO WIND

INSTALLATION:

APPLY MULCH AT THE RECOMMENDED RATE. SPREAD UNIFORMLY BY HAND, HAY FORK, MULCH BLOWER OR HYDROMULCHER. AFTER SPREADING, NO MORE THAN 25% OF THE

GROUND SURFACE SHOULD BE VISIBLE. 3. IF STRAW OR HAY IS USED, ANCHOR IT IMMEDIATELY IN ONE OF THE FOLLOWING WAYS:

- DURING VEGETATIVE ESTABLISHMENT, INSPECT AFTER STORM EVENTS FOR ANY EROSION.
- 2. IF ANY AREA SHOWS EROSION, REPAIR THE GRADE AND RE-APPLY "SILT STOP" POWDER AND RE-LAY AND STAPLE

ANCHORING METHOD	HOW TO APPLY
MULCH ANCHORING TOOL OR FARM DISK (DULL, SERRATED AND SET STRAIGHT)	CRIMP OR PUNCH THE STRAW OR HAY INTO THE SOIL 2 TO 4 INCHES. OPERATE MACHINERY ON THE CONTOUR OF SLOPE.
CLEATING WITH DOZER TRACKS	OPERATE DOZER UP AND DOWN SLOPE, NOT ACROSS OR ELSE THE TRACKS WILL FORM RILLS.
WOOD HYDROMULCH FIBERS	APPLY 1 TO 2 TONS/ACRE USING A HYDROMULCHER AT A RATE OF 750 LBS./ACRE WITH A TACKING AGENT (OR ACCORDING TO CONTRACTOR SPECIFICATIONS). DO NOT USE IN AREAS OF CONCENTRATED FLOW.
ASPHALT EMULSION	EMULSIFIED ASPHALT SHOULD CONFORM TO THE REQUIREMENTS OF ASTEM SPEC. #977. APPLY WITH SUITABLE EQUIPMENT AT A RATE OF 0.05 GAL/SY. DO NOT USE IN AREAS OF CONCENTRATED FLOW.
SYNTHETIC TACKIFIER, BINDER OR SOIL STABILIZER	APPLY ACCORDING TO MANUFACTURER'S RECOMMENDATIONS
BIODEGRADABLE NETTING (POLYPROPYLENE OR	APPLY OVER MULCH AND STAPLE WITH 6 TO 8 INCH WIRE

* INSTALL THE NETTING IMMEDIATELY AFTER APPLYING THE MULCH. IN AREAS OF CONCENTRATED WATER FLOW, LAY NETTING PARALLEL TO THE DIRECTION OF FLOW. ON OTHER SLOPES, LAY NETTING EITHER PARALLEL OR PERPENDICULAR TO DIRECTION OF FLOW. EDGES OF ADJACENT NETTING STRIPS SHOULD OVERLAP 4 TO 6 INCHES WITH THE STRIP ON THE UPGRADE SIDE OF ANY LATERAL WATER FLOW ON TOP. INSTALLATION DETAILS ARE SITE SPECIFIC. SO FOLLOW THE MANUFACTURER'S DIRECTIONS.

STAPLES. FOLLOW MANUFACTURER'S RECOMMENDATIONS

FOR INSTALLATION. BEST SUITED TO SLOPE APPLICATION.

- INSPECT AFTER STORM EVENTS TO CHECK FOR MOVEMENT OF MULCH OR FOR EROSION. IF WASHOUT, BREAKAGE, OR EROSION IS PRESENT, REPAIR THE SURFACE, THEN RE-SEED, RE-MULCH AND, IF
- APPLICABLE, INSTALL NEW NETTING

SIMILAR MATERIAL)*

3. CONTINUE INSPECTIONS UNTIL VEGETATION IS FIRMLY ESTABLISHED.

SOIL ROUGHENING

SOIL ROUGHENING IS A TEMPORARY EROSION CONTROL PRACTICE OFTEN USED IN CONJUNCTION WITH GRADING. SOIL ROUGHENING INVOLVES INCREASING THE RELIEF OF A BARE SOIL SURFACE WITH HORIZONTAL GROOVES BY EITHER STAIR-STEPPING (RUNNING PARALLEL TO THE CONTOUR OF THE LAND) OR USING CONSTRUCTION EQUIPMENT TO TRACK THE SURFACE. SLOPES THAT ARE NOT FINE GRADED AND LEFT IN A ROUGHENED CONDITION CAN ALSO REDUCE EROSION. SOIL ROUGHENING REDUCES RUNOFF VELOCITY, INCREASES INFILTRATION, REDUCES EROSION, TRAPS SEDIMENT, AND PREPARES THE SOIL FOR SEEDING AND PLANTING BY GIVING SEED AN OPPORTUNITY TO TAKE HOLD AND GROW.

SOIL ROUGHENING IS APPROPRIATE FOR ALL SLOPES. BUT WORKS ESPECIALLY WELL ON SLOPES GREATER THAN 3:1. ON PILES OF EXCAVATED SOIL, AND IN AREAS WITH HIGHLY ERODIBLE SOILS. THIS TECHNIQUE IS ESPECIALLY APPROPRIATE FOR SOILS THAT ARE FREQUENTLY DISTURBED, RECAUSE ROUGHENING IS RELATIVELY FASY. TO SLOW FROSION, ROUGHEN THE SOIL AS SOON AS POSSIBLE AFTER THE VEGETATION HAS BEEN REMOVED FROM THE SLOPE OR IMMEDIATELY AFTER GRADING ACTIVITIES HAVE CEASED (TEMPORARILY OR PERMANENTLY). USE THIS PRACTICE IN CONJUNCTION WITH SEEDING, PLANTING, AND TEMPORARY MULCHING TO STABILIZE AN AREA. A COMBINATION OF SURFACE ROUGHENING AND VEGETATION IS APPROPRIATE FOR STEEPER SLOPES AND SLOPES THAT WILL BE LEFT BARE FOR LONGER PERIODS OF TIME

SITING AND DESIGN CONSIDERATIONS

ROUGHENED SLOPE SURFACES HELP ESTABLISH VEGETATION, IMPROVE INFILTRATION, AND DECREASE RUNOFF VELOCITY. A ROUGH SOIL SURFACE ALLOWS SURFACE PONDING THAT PROTECTS LIME, FERTILIZER, AND SEED AND DECREASES EROSION POTENTIAL. GROOVES IN THE SOIL ARE COOLER AND PROVIDE MORE FAVORABLE MOISTURE CONDITIONS THAN HARD, SMOOTH SURFACES. THESE CONDITIONS PROMOTE SEED GERMINATION AND VEGETATIVE GROWTH

AVOID EXCESSIVE SOIL COMPACTING, BECAUSE THIS INHIBITS VEGETATION GROWTH AND CAUSES HIGHER RUNOFF VELOCITY, LIMIT ROUGHENING WITH TRACKED MACHINERY TO SANDY SOILS THAT DO NOT COMPACT EASILY; ALSO, AVOID TRACKING ON HEAVY CLAY SOILS, ESPECIALLY WHEN WET. SEED ROUGHENED AREAS AS QUICKLY AS POSSIBLE, AND FOLLOW PROPER PROCEDURES DEPENDING ON THE TYPE OF SLOPE AND THE AVAILABLE EQUIPMENT, USE DIFFERENT METHODS FOR ROUGHENING SOIL ON A SLOPE. THESE INCLUDE STAIR-STEP GRADING, GROOVING, AND TRACKING, WHEN CHOOSING A METHOD, CONSIDER FACTORS SUCH AS SLOPE STEEPNESS. MOWING REQUIREMENTS, WHETHER THE SLOPE IS FORMED BY CUTTING OR FILLING, AND AVAILABLE EQUIPMENT. CHOOSE FROM THE FOLLOWING METHODS FOR SURFACE ROUGHENING:

- CUT SLOPE ROUGHENING FOR AREAS THAT WILL NOT BE MOWED. USE STAIR-STEP GRADES OR GROOVE-CUT SLOPES FOR GRADIENTS STEEPER THAN 3:1. USE STAIR-STEP GRADING ON ANY ERODIBLE MATERIAL THAT IS SOFT ENOUGH TO BE RIPPED WITH A BULLDOZER. ALSO, IT IS WELL SUITED FOR SLOPES CONSISTING OF SOFT ROCK WITH SOME SUBSOIL. MAKE THE VERTICAL CUT DISTANCE LESS THAN THE HORIZONTAL DISTANCE, AND SLOPE THE HORIZONTAL PORTION OF THE STEP SLIGHTLY TOWARD THE VERTICAL WALL. KEEP INDIVIDUAL VERTICAL CUTS LESS THAN 2 FEET DEEP IN SOFT MATERIALS AND LESS THAN 3 FEET DEEP IN ROCKY MATERIALS.
- GROOVING. THIS TECHNIQUE USES MACHINERY TO CREATE A SERIES OF RIDGES AND DEPRESSIONS THAT RUN ACROSS THE SLOPE ALONG THE CONTOUR. MAKE GROOVES USING ANY APPROPRIATE IMPLEMENT THAT CAN BE SAFELY OPERATED ON THE SLOPE, SUCH AS DISKS, TILLERS, SPRING HARROWS, OR THE TEETH ON A FRONT-END LOADER BUCKET. MAKE THE GROOVES LESS THAN 3 INCHES DEEP AND LESS THAN 15 INCHES APART.
- FILL SLOPE ROUGHENING FOR AREAS THAT WILL NOT BE MOWED. FILL SLOPES WITH A GRADIENT STEEPER THAN 3:1 SHOULD BE PLACED IN LIFTS LESS THAN 9 INCHES, AND PROPERLY COMPACT EACH LIFT. THE FACE OF THE SLOPE SHOULD CONSIST OF LOOSE, UNCOMPACTED FILL 4 TO 6 INCHES DEEP. IF NECESSARY, ROUGHEN THE FACE OF THE SLOPES BY GROOVING THE SURFACE AS DESCRIBED ABOVE. DO NOT BLADE OR SCRAPE THE FINAL SLOPE FACE.
- CUTS, FILLS, AND GRADED AREAS THAT WILL BE MOWED. MAKE MOWED SLOPES NO STEEPER THAN 3:1. ROUGHEN THESE AREAS WITH SHALLOW GROOVES LESS THAN 10 INCHES APART AND DEEPER THAN 1 INCH USING NORMAL TILLING, DISKING, OR HARROWING EQUIPMENT (A CULTIPACKER-SEEDER CAN ALSO BE USED). EXCESSIVE ROUGHNESS IS UNDESIRABLE WHERE MOWING IS PLANNED.
- ROUGHENING WITH TRACKED MACHINERY. TO AVOID UNDUE COMPACTION OF THE SOIL SURFACE, LIMIT ROUGHENING WITH TRACKED MACHINERY ONLY TO SANDY SOILS. OPERATE TRACKED MACHINERY PERPENDICULARLY TO THE SLOPE TO LEAVE HORIZONTAL DEPRESSIONS IN THE SOIL. TRACKING IS GENERALLY NOT AS EFFECTIVE AS OTHER ROUGHENING METHODS.

SOIL ROUGHENING IS NOT APPROPRIATE FOR ROCKY SLOPES. TRACKED MACHINERY CAN EXCESSIVELY COMPACT THE SOIL. TYPICALLY, SOIL ROUGHENING IS EFFECTIVE ONLY FOR GENTLE OR SHALLOW DEPTH RAINS. IF ROUGHENING IS WASHED AWAY IN A HEAVY STORM, RE-ROUGHEN THE SURFACE AND RESEED

MAINTENANCE CONSIDERATIONS

INSPECT ROUGHENED AREAS AFTER STORMS TO SEE IF RE-ROUGHENING IS NEEDED. REGULAR INSPECTION SHOULD INDICATE WHERE ADDITIONAL EROSION AND SEDIMENT CONTROL MEASURES ARE NEEDED. IF RILLS (SMALL WATERCOURSES THAT HAVE STEEP SIDES AND ARE USUALLY ONLY A FEW INCHES DEEP) APPEAR, FILL, REGRADE, AND RESEED THEM IMMEDIATELY. USE PROPER METHODS.

EFFECTIVENESS:

SOIL ROUGHENING PROVIDES MODERATE EROSION PROTECTION FOR BARE SOILS WHILE VEGETATIVE COVER IS BEING ESTABLISHED. IT IS INEXPENSIVE AND SIMPLE FOR SHORT-TERM EROSION CONTROL WHEN USED WITH OTHER EROSION AND SEDIMENT CONTROLS.

TOPSOIL (SALVAGE AND UTILIZATION)

SALVAGING AND STOCKPILING:

DETERMINE DEPTH AND SUITABILITY OF TOPSOIL AT THE SITE. PRIOR TO STRIPPING TOPSOIL, INSTALL ANY SITE-SPECIFIC DOWNSLOPE PRACTICES NEEDED TO CONTROL RUNOFF AND SEDIMENTATION.

REMOVE THE SOIL MATERIAL NO DEEPER THAN WHAT THE COUNTY SOIL SURVEY DESCRIBES AS "SURFACE SOIL" (i.e., A OR AP HORIZON). STOCKPILE THE MATERIAL IN ACCESSIBLE LOCATIONS THAT NEITHER INTERFERE WITH OTHER CONSTRUCTION ACTIVITIES NOR BLOCK NATURAL DRAINAGE; AND INSTALL SILT FENCES, STRAW BALES, OR OTHER BARRIERS TO TRAP SEDIMENT. (SEVERAL SMALLER PILES AROUND THE CONSTRUCTION SITE ARE USUALLY MORE EFFICIENT AND EASIER TO CONTAIN THAN ONE LARGE PILE.)

IF SOIL IS STOCKPILED FOR MORE THAN 6 MOS., IT SHOULD BE TEMPORARILY SEEDED OR COVERED WITH A TARP OR SURROUNDED BY A SEDIMENT

SPREADING TOPSOII

PRIOR TO APPLYING TOPSOIL, GRADE THE SUBSOIL AND ROUGHEN THE TOP 3-4 IN. BY DISKING. THIS HELPS

- THE TOPSOIL BOND WITH THE SUBSOIL DO NOT APPLY TOPSOIL WHEN THE SITE IS WET, MUDDY OR FROZEN, BECAUSE IT MAKES SPREADING DIFFICULT, NHIBITS BONDING, AND CAN CAUSE COMPACTION PROBLEMS
- APPLY TOPSOIL EVENLY TO A DEPTH OF AT LEAST 4 IN. (8-12 IN. IF THE UNDERLYING MATERIAL IS BEDROCK, LOOSE SAND, ROCK FRAGMENTS, GRAVEL OR OTHER UNSUITABLE SOIL MATERIAL) COMPACT SLIGHTLY TO IMPROVE CONTACT WITH THE SUBSOIL

INSPECT NEWLY TOPSOILED AREAS FREQUENTLY UNTIL VEGETATION IS ESTABLISHED. REPAIR ERODED OR DAMAGED AREAS AND REPLANT.

TEMPORARY SEEDING

THESE INSTALLATION PRACTICES ARE NEEDED TO CONTROL EROSION, SEDIMENTATION, AND WATER RUNOFF, SUCH AS TEMPORARY AND PERMANENT DIVERSIONS, SEDIMENT TRAPS OR BASINS, SILT FENCES, AND TRIANGULAR SILT DIKES.

FERTILIZE AS REQUIRED

WORK THE FERTILIZER INTO THE SOIL 2-4 IN. DEEP WITH A DISK OR RAKE OPERATED ACROSS THE SLOPE

GRADE THE SITE AS SPECIFIED IN THE CONSTRUCTION PLAN

- SELECT A SEEDING MIXTURE AND RATE FROM THE TABLE AND PLANT AT DEPTH AND ON DATES SHOWN. APPLY SEED UNIFORMLY WITH A DRILL OR CULTIPACKER-SEEDER OR BY BROADCASTING, AND COVER TO THE DEPTH SHOWN.
- IF DRILLING OR BROADCASTING, FIRM THE SEEDBED WITH A ROLLER OR CULTIPACKER. MULCH SEEDED AREAS TO INCREASE SEEDING SUCCESS
- UPON COMPLETION OF THE ROUGH GRADING, ALL AREAS AFFECTED BY CONSTRUCTION SHALL BE TEMPORARILY SEEDED IF THEY WILL REMAIN DORMANT FOR GREATER THAN 7 DAYS. THESE AREAS SHALL BE STABILIZED WITHIN 14 DAYS OF REMAINING DORMANT AND EROSION CONTROL BLANKETS SHALL BE INSTALLED ON SIDE SLOPES AS SHOWN ON THE PLANS
- INSPECT PERIODICALLY AFTER PLANTING TO SEE THAT VEGETATIVE STANDS ARE ADEQUATELY ESTABLISHED, RE-SEED IF NECESSARY. CHECK FOR EROSION DAMAGE AFTER STORM EVENTS AND REPAIR, RESEED AND MULCH IF NECESSARY.
- TOP-DRESS FALL SEEDED WHEAT OR RYE SEEDING WITH 50 LBS./ACRE OF NITROGEN IN FEBRUARY OR MARCH IF NITROGEN DEFICIENCY IS APPARENT. TEMPORARY SEEDING RECOMMENDATIONS

	TEIVII OIWIINI SEEDIIVO NEC	OWNITE INDIVIDUAL			
TE	EMPORARY SEEDING RECOMME	ENDATIONS:			
	SEED SPECIES	RATE/ACRE	PLANTING DEPTH	OPTIMUM DATES**	
	WHEAT OR RYE SPRING OATS ANNUAL RYEGRASS	150 LBS. 100 LBS. 40 LBS.	1 TO 1.5 INCHES 1 INCH 0.25 INCH	SEPTEMBER 15 TO OCTOBER 30 MARCH 1 TO APRIL 15 MARCH 1 TO MAY 1 AUGUST 1 TO SEPTEMBER 1	
	GERMAN MILLET SUDANGRASS	40 LBS. 35 LBS.	1 TO 2 INCHES 1 TO 2 INCHES	MAY 1 TO JUNE 1 MAY 1 TO JULY 30	

* PERENNIAL SPECIES MAY BE USED AS A TEMPORARY COVER, ESPECIALLY IF THE AREA TO BE SEEDED WILL REMAIN IDLE FOR MORE THAN A YEAR ** SEEDING DONE OUTSIDE THE OPTIMUM DATES INCREASES THE CHANCE OF SEEDING FAILURE

PERMANENT SEEDING

PERMANENTLY SEED ALL FINAL GRADE AREAS (E.G., LANDSCAPE BERMS, DRAINAGE SWALES, EROSION CONTROL STRUCTURES, ETC.) AS EACH IS COMPLETED AND ALL AREAS WHERE ADDITIONAL WORK IS NOT SCHEDULED FOR A PERIOD OF MORE THAN A YEAR.

THESE INSTALLATION PRACTICES ARE NEEDED TO CONTROL EROSION, SEDIMENTATION, AND WATER RUNOFF, SUCH AS

TEMPORARY AND PERMANENT DIVERSIONS, SEDIMENT TRAPS OR BASINS, SILT FENCES, AND TRIANGULAR SILT DIKES. GRADE THE SITE AS SPECIFIED IN THE CONSTRUCTION PLAN AND FILL IN DEPRESSIONS THAT CAN COLLECT WATER.

ADD TOPSOIL TO ACHIEVE NEEDED DEPTH FOR ESTABLISHMENT OF VEGETATION

TILL THE SOIL TO OBTAIN A UNIFORM SEEDBED. WORKING THE FERTILIZER INTO THE SOIL 2-4 IN. DEEP WITH A DISK OR RAKE OPERATED ACROSS THE

OPTIMUM SEEDING DATES ARE MARCH 1-MAY 10 AND AUGUST 10-SEPTEMBER 30. PERMANENT SEEDING DONE BETWEEN MAY 10 AND AUGUST 10 MAY NEED TO BE IRRIGATED. AS AN ALTERNATIVE. USE TEMPORARY SEEDING UNTIL THE PREFERRED DATE FOR PERMANENT SEEDING.

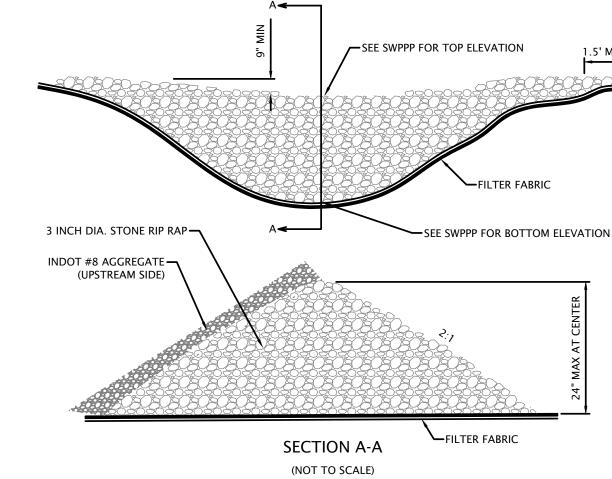
- SELECT A SEEDING MIXTURE AND RATE FROM THE TABLE AND PLANT AT DEPTH AND ON DATES SHOWN APPLY SEED UNIFORMLY WITH A DRILL OR CULTIPACKER-SEEDER OR BY BROADCASTING, AND COVER TO THE DEPTH SHOWN.
- IF DRILLING OR BROADCASTING, FIRM THE SEEDBED WITH A ROLLER OR CULTIPACKER. MULCH SEEDED AREAS. USE EROSION CONTROL BLANKETS ON SLOPING AREAS. IF SEEDING IS DONE WITH A HYDROSEEDER, FERTILIZER AND MULCH CAN BE APPLIED WITH THE SEED IN A SLURRY MIXTURE.
- MAINTENANCE 1. INSPECT PERIODICALLY AFTER PLANTING TO SEE THAT VEGETATIVE STANDS ARE ADEQUATELY ESTABLISHED, RE-SEED

CHECK FOR EROSION DAMAGE AFTER STORM EVENTS AND REPAIR, RESEED AND MULCH IF NECESSARY.

PERMANENT SEFDING RECOMMENDATIONS THIS TABLE PROVIDES SEVERAL SEEDING OPTIONS. ADDITIONAL SEED SPECIES AND MIXTURES ARE AVAILABLE COMMERCIALLY. WHEN SELECTING A MIXTURE, CONSIDER SITE CONDITIONS, INCLUDING SOIL PROPERTIES (E.G., SOIL PH AND DRAINAGE), SLOPE ASPECT AND THE TOLERANCE OF EACH SPECIES TO SHADE AND DROUGHT.

SEED SPECIES AND MIXTURES	RATE/ACRE	OPTIMUM SOIL pH
OPEN AND DISTURBED AREAS (REMAINING IDLE	FOR MORE THAN ONE YEAR)	
PERENNIAL RYEGRASS + WHITE OR LADINO DOVER	30 TO 50 LBS. 1 TO 2 LBS.	5.6 TO 7.0
KENTUCKY BLUEGRASS + SMOOTH BROMEGRASS + SWITCHGRASS + TIMOTHY + PERENNIAL RYEGRASS + WHITE OR LADINO DOVER	20 LBS. 10 LBS. 3 LBS. 4 LBS. 10 LBS. 1 TO 2 LBS.	5.5 TO 7.5

RUNOFF CONTROL MEASURES RIP-RAP CHECK DAMS



INSPECT AFTER EACH STORM EVENT.

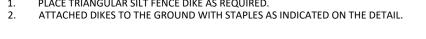
REMOVE BUILT-UP SEDIMENT AND REPAIR/REPLACE THE CHECK DAMS AS NEEDED.

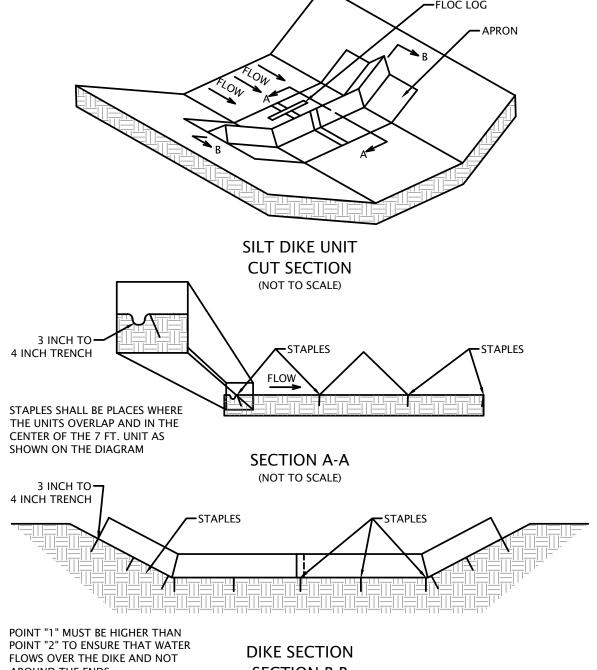
TRIANGULAR SILT FENCE DIKE - CHECK DAMS

INCHES LONG. STAPLES SHALL BE PLACED AS INDICATED ON THE INSTALLATION DETAIL

THE TRIANGULAR-SHAPED INNER MATERIAL SHALL BE URETHANE FORM. THE OUTER COVER SHALL BE A WOVEN GEOTEXTILE FABRIC PLACED AROUND THE INNER MATERIAL AND ALLOWED TO EXTEND BEYOND BOTH SIDES OF THE TRIANGLE 2 TO 3 FEE THE DIKES SHALL BE ATTACHED TO THE GROUND WITH WIRE STAPLES. THE STAPLES SHALL BE #11 GAUGE WIRE AND BE AT LEAST 6 TO 8 ANCHORING:

INSTALLATION: PLACE TRIANGULAR SILT FENCE DIKE AS REQUIRED.





AROUND THE ENDS

SECTION B-B (NOT TO SCALE)

INSPECT AFTER FACH STORM EVENT.

MAINTENACE

REMOVE BUILT-UP SEDIMENT AND REPAIR/REPLACE THE CHECK DAMS AS NEEDED.

GEORIDGE DITCH BERM - CHECK DAMS

GEORIDGE OR GEORIDGE BIO BY NILEX PRODUCTS, AN HDPE PRODUCT THAT SERVES TO DISSIPATE WATER ENERGY WITHIN A DITCH OR CHANNEL. GEORIDGE IS TO BE USED IN APPLICATIONS WHERE THE MEASURE WILL BE REMOVED AFTER THE CHANNEL IS STABILIZED. GEORIDGE BIO CAN BE USED WHEN THE MEASURE CAN BE LEFT TO DECOMPOSE IN LIEU OF BEING REMOVED.

IN THE CHANNEL BOTTOM.

INSTALLATION:

1. PLACE AN EROSION CONTROL BLANKET (ECB), LAID PARALLEL WITH THE CHANNEL DIRECTION, IN THE AREA WHERE THE GEORIDGE IS TO BE PLACED. ECB SHALL BE APPROPRIATE FOR THE CHANNEL SLOPE. VOLUME AND VELOCITY. ECB SHALL BE SECURED WITH A 4" TRENCH AT THE UPSTREAM EDGE, WITH MINIMUM 6-INCH STAPLES PLACED 21-INCH O.C. ALONG THE UPSTREAM AND DOWNSTREAM EDGES

2. PLACE GEORIDGE BERM IN THE MIDDLE OF THE ECB, PERPENDICULAR TO THE CHANNEL FLOW DIRECTION, AND ANCHOR WITH 10-INCH SPIRAL SPIKES. A MINIMUM OF 3 ANCHORS SHALL BE USED ON THE UPSTREAM SIDE AND 2 ANCHORS ON THE DOWNSTREAM SIDE. IF MORE THAN ONE GEORIDGE BERM PANEL IS REQUIRED TO SPAN THE CHANNEL, LINE UP THE ANCHORING HOLES FOR INSTALLATION OF THE ANCHORS. WHEN PLACING THE GEORIDGE PANEL ON THE SIDE SLOPE OF THE CHANNEL, THE BOTTOM OF THE PANELS SHOULD MEET WITH THE RIDGE BEING OVERLAPPED. THIS WILL PREVENT WATER FROM PASSING THROUGH THE BERM.

ADDITIONALLY, THE OUTSIDE EDGE OF THE PANEL ON THE SIDE SLOPE SHOULD BE INSTALLED SO THAT IT IS HIGHER THAN THE TOP OF THE PANEL

FND ABOVE GEORIDGE PANEI TOP OF RIDGI SIDE SLOPE:

4. THE SPACING IS CALCULATED BY DIVIDING THE HEIGHT OF THE GEORIDGE BY THE GRADIENT OF THE CHANNEL SLOPE. 9-INCH / 0.0.2 GRADIENT = 450 INCHES OR 37.5 FEET

INSPECT AFTER EACH STORM EVENT.

REMOVE BUILT-UP SEDIMENT WHEN IT REACHES HALF THE HEIGHT OF THE GEORIDGE. REPAIR/REPLACE THE GEORIDGE AND THE EROSION CONTROL MAT AS NEEDED.

SEDIMENT CONTROL MEASURES **POLYMER SYSTEMS**

APS 700 SERIES FLOC LOG OR EQUAL MATERIAL:

INSTALLATION:

- THE FLOC LOG VENDOR SHALL SAMPLE THE WATER THAT IS TO BE TREATED WITH THE SYSTEM. THIS SAMPLE SHALL BE USED TO DETERMINE THE SITE-SPECIFIC POLYMER MIX THAT SHOULD BE USED. IN APPLICATIONS WHERE THE OBJECTIVE OF THIS MEASURE IS TO MEET THE TOTAL SUSPENDED SOLIDS REQUIREMENTS PRIOR TO COMPLETION OF THE DETENTION POND: I.E. THE SIDE SLOPES ARE NOT FULLY STABILIZED. DEWATERING THE POND FOR FURTHER EXPANSION. ETC., THE FLOC LOG SHOULD BI INSTALLED AT THE END OF THE OUTFALL PIPE AND A TEMPORARY MATERIAL SUCH AS GEOJUTE SHOULD BE PLACED DOWNSTREAM OF THE FLOC LOG PROVIDING A SEDIMENT SETTLING AREA. (SEE PLANS FOR SPECIFIC INSTALLATION LOCATIONS)
- IN APPLICATIONS WHERE THE OBJECTIVE OF THIS MEASURE IS TO MEET THE TOTAL SUSPENDED SOLIDS REQUIREMENTS AFTER THE DETENTION POND IS COMPLETED, THE FLOC LOG SHOULD BE INSTALLED AT THE END OF THE INLET PIPES INTO THE DETENTION POND. THIS WILL CAUSE THE SEDIMENT TO
- SETTLE MORE QUICKLY IN THE WET DETENTION POND. PROVIDING A CLEANER DISCHARGE. (SEE PLANS FOR SPECIFIC INSTALLATION LOCATIONS). FOLLOWING THE USE OF THE FLOC LOG, THE SETTLED SEDIMENT WILL NEED TO BE REMOVED. THIS TEMPORARY SETTLING MEDIA REMOVED, OR THE DETENTION POND MIGHT NEED TO BE CLEANED IF SEDIMENT SETTLING HAS SIGNIFICANTLY REDUCED THE POND VOLUME.
- MAINTENANCE: INSPECT AFTER STORM EVENTS TO CHECK FOR MOVEMENT OF MULCH OR FOR EROSION.
- IF WASHOUT, BREAKAGE, OR EROSION IS PRESENT IN THE SEDIMENT SETTLING MEDIA, REPAIR THE MEDIA.
- BE SURE THE FLOC LOG IS SECURE ATTACHED AT THE INSTALLED LOCATION, VERIFY THAT STORM WATER IS HAVING CONTACT WITH THE FLOC LOG.

FIBER ROLLS

TUBE SHAPED FIBER ROLLS FILLED WITH STRAW, FLAX, RICE, COCONUT FIBER MATERIAL, MULCH, OR COMPOSTED MATERIAL. EACH ROLL IS WRAPPED WITH UV-DEGRADABLE POLYPROPYLENE NETTING FOR LONGEVITY OR WITH 100 PERCENT BIODEGRADABLE MATERIALS LIKE BURLAP, JUTE, OR COIR.

- INSTALL ROLLS PARALLEL WITH THE SLOPE CONTOUR, WITH THE ENDS SLIGHTLY LOWER THAN THE
- MID-SECTION. TO PREVENT WATER PONDING AT THE MID-SECTION. TURN THE ENDS SLIGHTLY UPSLOPE TO PREVENT WATER FROM BYPASSING THE EXCAVATE A TRENCH WITH A WIDTH AND DEPTH EQUAL TO ONE-FOURTH THE DIAMETER OF THE LOG.
- WHERE APPLICABLE INSTALL THE MEASURE UPSLOPE OF A CURB OR SIDEWALK. PLACING THE MEASURE AGAINST THE CURB WILL PROVIDE ADDITIONAL STABILITY AND RESISTANCE TO SURFACE FLOW. PLACE ROLLS END TO END TO FORM A CONTINUOUS BARRIER
- HARDWOOD STAKES SHALL BE DRIVEN THROUGH THE ROLLS, SPACED NO GREATER THAN 5' TO A DEPTH OF 18". THE FIRER ROLLS SHOULD BE EASTENED TO THE HARDWOOD STAKES WITH ROPE BACKFILL THE TRENCH WITH EXCAVATED SOIL TO GROUND LEVEL ON THE DOWN-SLOPE SIDE AND 2" ABOVE GROUND LEVEL ON THE UP-SLOPE SIDE OF

- THE ROLLS SHOULD BE INSPECTED WEEKLY AND AFTER EACH RAINFALL EVENT. INSPECTION SHOULD INCLUDE IF THE MATERIAL'S DIAMETER IS LESS THAN SPECIFICATION AND IF THE OUTER NETTING HAS BEEN DEGRADED OR BROKEN.
- REMOVE ACCUMULATED SEDIMENT WHEN IT REACHES ONE-QUARTER OF THE HEIGHT OF THE ROLL. REPAIR FRODED AND DAMAGED AREAS.
- 4. IF PONDING BECOMES EXCESSIVE, ROLLS SHOULD BE REMOVED AND EITHER RECONSTRUCTED OR NEW PRODUCT INSTALLED.

SEDIMENT BASINS/DETENTION PONDS

DEPRESSIONAL AREAS CONSTRUCTED AT THE OUTFALL OF PIPES, END OF CHANNELS, OR END OF SURFACE SHEET FLOW, WHICH SERVES TO

- . AT LOCATIONS SHOWN ON THE PLANS, THE CONTRACTOR SHALL EXCAVATE A SMALL BASIN. THE BASIN SIZE SHALL BE SHOWN ON THE PLANS AND IS DETERMINED BY THE VOLUME OF WATER TRIBUTARY TO THE BASIN. THE BASIN OVERFLOW ELEVATION SHALL BE LOWER THAN THE INCOMING WATER.
- BY A MINIMUM OF 12 INCHES THE BASIN SHALL BE LINED WITH A GEOTEXTILE FABRIC, 9" OF 4" RIPRAP SHALL BE PLACED ALL AROUND THE INSIDE OF THE BASIN.
- THE BASINS SHOULD BE INSPECTED WEEKLY AND AFTER EACH RAINFALL EVENT.
- REPLACE AND RESTORE ANY BASIN BANK FROSION.
- REPAIR OR REPLACE ANY DISPLACED RIPRAP. RE-EXCAVATE AND REPLACE THE BASIN WHEN IT BECOMES MORE THAN 50% FULL OF SEDIMENT

DEWATERING BAGS

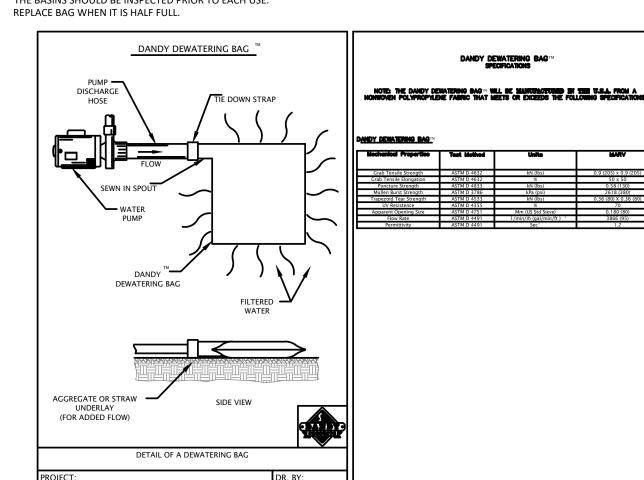
"DANDY" DE-WATERING BAG OR "PUMP-IT" DE-WATERING BAG

INSTALLATION

INSTALL AT LOCATION OF THE DEWATERING PUMP OUTFALL SIZE THE BAG T THE DISCHARGE RATE. THE MAXIMUM BAG SIZE MAY LIMIT THE DISCHARGE RATE OF THE PUMP. CONNECT BAG TO PUMP OUTFALL PER MANUFACTURER'S INSTRUCTIONS.

INSTALL BAG UPSTREAM OF THE RECEIVING STRUCTURE LOCATION. OUTLET TO GRASS AREA IF POSSIBLE

MAINTENANCE: THE BASINS SHOULD BE INSPECTED PRIOR TO EACH USE.



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03/21/2024

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PROIFCT NO

SEDIMENT CONTROL MEASURES (continued) **INLET PROTECTION**

FLEXSTORM CATCH-IT BY ADS, INC. OR APPROVED EQUAL. MATERIAI · ADS CAN BE CONTACTED AT (866) 287-8655

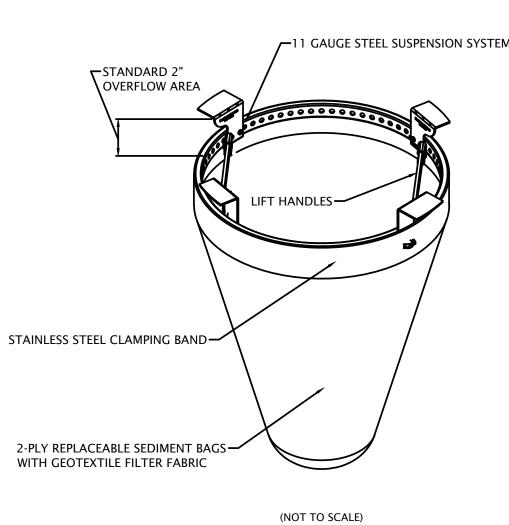
CAPACITY:

ominal Bag	Solids Storage	Filtered Flow Rate at 50% Max	
Size	(CuFt)	FX (Woven)	IL (NonWoven)
Small	1.6	1.2	0.9
Medium	2.1	1.7	1.3
Large	3.8	2.7	1.9
XL	4.2	3.6	2.6

1. REMOVE GRATE; INSTALL PRIOR TO LAND DISTURBING ACTIVITIES AND/OR IMMEDIATELY AFTER DRAINAGE STRUCTURES HAVE BEEN

DROP INLET PROTECTION ONTO LOAD BEARING LIP OF CASTING OR CONCRETE STRUCTURE.

REPLACE GRATE



INLET PROTECTION - CURB BASKET

CONTRIBUTING DRAINAGE AREA: 0.25 ACRE MAXIMUM

AT CURB INLETS WHERE BARRIERS SURROUNDING THEM WOULD BE IMPRACTICAL OR UNSAFE LOCATION:

D2 CATCH-ALL INLET PROTECTOR OR APPROVED EQUAL MATERIAL: D2 LAND & WATER RESOURCE (WWW.D2LWR.COM OR 800-597-2180)

RUNOFF FROM A 2-YEAR FREQUENCY, 24-HOUR DURATION STORM EVENT ENTERING A STORM DRAIN WITHOUT BYPASS FLOW

FABRICATED METAL WITH TOP WDITH/LENGTH DIMENSIONS SUCH THAT THE BASKET FITS INTO THE INLET WITHOUT GAPS

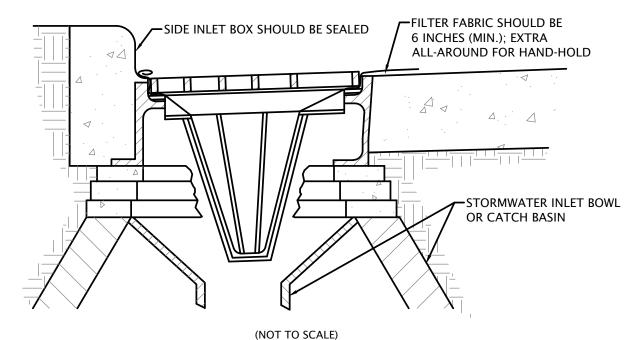
GEOTEXTILE FABRIC: FOR FILTRATION

1. INSTALL BASKET CURB INLET PROTECTIONS AS SOON AS INLET BOXES ARE INSTALLED IN THE NEW DEVELOPMENT OR BEFORE LAND-DISTURBING ACTIVITIES BEGIN IN A STABILIZED AREA.

IF NECESSARY, ADAPT BASKET DIMENSIONS TO FIT INLET BOX DIMENSIONS, WHICH VARY ACCORDING TO THE MANUFACTURER AND/OR MODEL. SEAL THE SIDE INLETS ON THOSE TYPES OF INLET BOXES THAT HAVE THEM. REMOVE THE GRATE AND PLACE THE BASKET IN THE INLET.

CUT AND INSTALL A PIECE OF FILTER FABRIC LARGE ENOUGH TO LINE THE INSDE OF THE BASKET AND EXTEND AT LEAST 6 INCHES BEYOND THE FRAM.

REPLACE THE INLET GRATE, WHICH ALSO SERVES TO ANCHOR THE FABRIC.



INSPECT AFTER EACH STORM EVENT

REMOVE BUILT-UP SEDIMENT AND REPAIR (OR REPLACE IF NECESSARY) THE GEOTEXTILE FABRIC AFTER EACH STORM EVENT. PERIODICALLY REMOVE SEDIMENT AND TRACKED-ON SOIL FROM THE STREET (BUT NOT BY FLUSHING WITH WATER) TO REDUCE THE SEDIMENT LOAD ON

COMMON CONCERNS: 1. SEDIMENT NOT REMOVED AND GEOTEXTILE FABRIC NOT REPLACED FOLLWING A STORM EVENT RESULTS IN INCREASED SEDIMENT, TRACKING, TRAFFIC

GEOTEXTILE FABRICE PERMITTIVITY THAT IS TOO LOW RESULTS IN RAPID CLOGGING AND CAUSES SEVERE PONDING WITH SEDIMENT ENTERING THE DRAIN

3. DRAINAGE AREA TOO LARGE RESULTS IN SEDIMENT OVERLAOD AND SEVERE PONDING; SEDIMENT ENTERS THE DRAIN IF FABRIC BREAKS.

TEMPORARY CONSTRUCTION ENTRANCE/EXIT PAD

2 TO 3 INCHES OF WASHED STONE (INDOT #2 AGGREGATE) OVER A STABLE FOUNDATION MATERIAL:

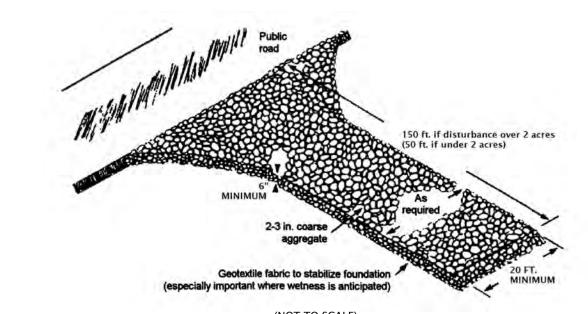
8 INCHES MINIMUM THICKNESS

20 FEET MINIMUM OR FULL WIDTH OF ENTRANCE/EXIT ROADWAY, WHICHEVER IS GREATER

150 FEET MINIMUM (50 FEET MINIMUM IF SITE DISTURBANCE IS UNDER 2.0 ACRES)

LEVEL AREA WITH 3 INCHES OF WASHED STONE (MINIMUM) OR A COMMERCIAL RACK AND WASTE WATER DIVERTED TO WASHING FACILITY A SEDIMENT TRAP OR BASIN (PRACTICE 3.72)

MAY BE USED UNDER WET CONDITIONS OR FOR SOILS WITHIN A HIGH SEASONAL WATER TABLE TO PROVIDE GREATER GEOTEXTILE FABRIC UNDERLINER:



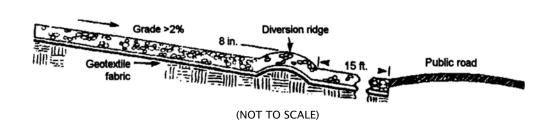
AVOID LOCATING ON STEEP SLOPES OR AT CURVES IN PUBLIC ROADS.

REMOVE ALL VEGETATION AND OTHER OBJECTIONABLE MATERIAL FROM THE FOUNDATION AREA, AND GRADE AND CROWN FOR POSITIVE DRAINAGE. IF SLOPE TOWARDS THE ROAD EXCEEDS 2%, CONSTRUCT A 6-8 IN. HIGH WATER BAR (RIDGE) WITH 3:1 SIDE SLOPES ACROSS THE FOUNDATION AREA ABOUT 15 FT. FROM THE ENTRANCE TO DIVERT RUNOFF AWAY FROM THE ROAD (PRACTICE 3.24) SEE EXHIBIT.

INSTALL PIPE UNDER THE PAD IF NEEDED TO MAINTAIN PROPER PUBLIC ROAD DRAINAGE. IF WET CONDITIONS ARE ANTICIPATED, PLACE GEOTEXTILE FABRIC ON THE GRADED FOUNDATION TO IMPROVE STABILITY.

PLACE STONE TO DIMENSIONS AND GRADE SHOWN IN THE EROSION/SEDIMENT CONTROL PLAN, LEAVING THE SURFACE SMOOTH AND SLOPED FOR

DIVERT ALL SURFACE RUNOFF AND DRAINAGE FROM THE STONE PAD TO A SEDIMENT TRAP OR BASIN.



INSPECT ENTRANCE PAD AND SEDIMENT DISPOSAL AREA WEEKLY AND AFTER STORM EVENTS OR HEAVY USE.

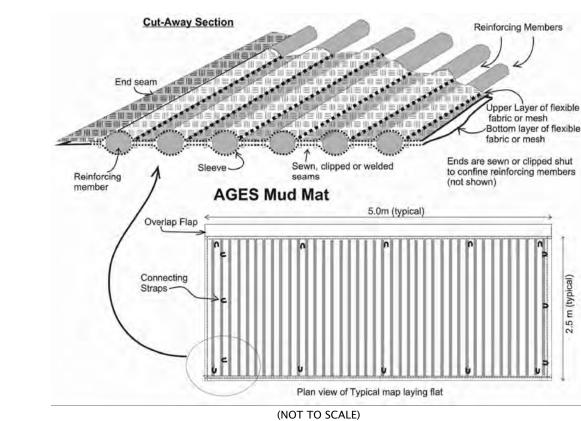
RESHAPE PAD AS NEEDED FOR DRAINAGE AND RUNOFF CONTROL. TOP-DRESS WITH CLEAN STONE AS NEEDED.

IMMEDIATELY REMOVE MUD AND SEDIMENT TRACKED OR WASHED ONTO PUBLIC ROADS BY BRUSHING OR SWEEPING. FLUSHING SHOULD ONLY BE USED

IF THE WATER IS CONVEYED INTO A SEDIMENT TRAP OR BASIN. REPAIR ANY BROKEN ROAD PAVEMENT IMMEDIATELY

MUD MATS - ENTRANCE STABILIZATION

MUD MAT BY AGES. RE-USABLE SOIL STABILIZATION SYSTEM OR APPROVED EQUAL



AVOID LOCATING ON STEEP SLOPES OR AT CURVES IN PUBLIC ROADS. REMOVE ALL VEGETATION AND OTHER OBJECTIONABLE MATERIAL FROM THE FOUNDATION AREA, AND GRADE AND CROWN FOR POSITIVE DRAINAGE.

INSTALL PER MANUFACTURER'S RECOMMENDATIONS. UNROLL, CONNECT MATS TOGETHER TO FORM AREA OF PROTECTION AND PROPERLY ANCHOR TO

DIVERT ALL SURFACE RUNOFF AND DRAINAGE FROM THE MUD MAT TO A SEDIMENT TRAP OR BASIN. MINIMUM SIZE OF THE MAT IS 12 FEET WIDE AND 50 FEET LONG.

INSPECT ENTRANCE PAD DAILY AND REMOVE BUILT-UP DEBRIS AS NECESSARY. INSPECT ENTRANCE PAD FOR BREAKS AND TEARS IN THE MATERIAL. REPAIR OR REPLACE AS NECESSARY.

IMMEDIATELY REMOVE MUD AND SEDIMENT TRACKED OR WASHED ONTO PUBLIC ROADS BY BRUSHING OR SWEEPING. FLUSHING SHOULD ONLY BE USED IF THE WATER IS CONVEYED INTO A SEDIMENT TRAP OR BASIN. REPAIR ANY BROKEN ROAD PAVEMENT IMMEDIATELY.

MATERIAL MANAGEMENT MEASURES (HOUSEKEEPING) **CONCRETE WASHOUT**

MINIMUM OF TEN MIL POLYETHYLENE SHEETING, FREE OF HOLES, TEARS, AND OTHER DEFECTS MATERIALS: ORANGE SAFETY FENCING OR EQUIVALENT

METAL PINS OR STAPLES SIX INCHES IN LENGTH MINIMUM.

LOCATION 1. LOCATE CONCRETE WASHOUT SYSTEMS AT LEAST 50 FEET FROM ANY CREEKS, WETLANDS, DITCHES, KARST FEATURES, OR STORM DRAINS/MANMADE

2. LOCATE CONCRETE WASHOUT SYSTEMS IN RELATIVELY FLAT AREAS THAT HAVE ESTABLISHED VEGETATIVE COVER AND DO NOT RECEIVE RUNOFF FROM

3. LOCATE AWAY FROM OTHER CONSTRUCTION TRAFFIC IN AREAS THAT PROVIDE EASY ACCESS FOR CONCRETE TRUCKS.

1. A BASE SHALL BE CONSTRUCTED AND PREPARED THAT IS FREE OF ROCKS AND OTHER DEBRIS THAT MAY CAUSE TEARS OR PUNCTURES IN THE POLYETHYLENE

. INSTALL THE POLYETHYLENE LINING. FOR EXCAVATED SYSTEMS. THE LINING SHOULD EXTEND OVER THE ENTIRE EXCAVATION. THE LINING FOR BERMED SYSTEMS SHOULD BE INSTALLED OVER THE POOLING AREA WITH ENOUGH MATERIAL TO EXTEND THE LINING OVER THE BERM OR CONTAINMENT SYSTEM.

THE LINING SHOULD BE SECURED WITH PINS, STAPLES, OR OTHER FASTENERS. PLACE FLAGS, SAFETY FENCING, OR EQUIVALENT TO PROVIDE A BARRIER TO CONSTRUCTION EQUIPMENT AND OTHER TRAFFIC.

INSTALL SIGNAGE THAT IDENTIFIES CONCRETE WASHOUT AREAS

4. WHERE NECESSARY, PROVIDE STABLE INGRESS AND EGRESS OR ALTERNATIVE APPROACH PAD.

INSTALLATION:

. INSPECT DAILY AND AFTER EACH STORM EVENT. INSPECT THE SYSTEM FOR LEAKS, SPILLS, AND TRACKING OF SOIL BY EQUIPMENT.

INSPECT THE POLYETHYLENE LINING FOR FAILURE, INCLUDING TEARS AND PUNCTURES. ONCE CONCRETE WASTES HARDEN, REMOVE AND DISPOSE OF THE MATERIAL.

EXCESS CONCRETE SHOULD BE REMOVED WHEN THE WASHOUT SYSTEM REACHES 50 PERCENT OF THE DESIGN CAPACITY. USE OF THE SYSTEM SHOULD BE DISCONTINUED UNTIL APPROPRIATE MEASURES CAN BE INITIATED TO CLEAN THE STRUCTURE. UPON REMOVAL OF THE SOLIDS, INSPECT THE STRUCTURE. REPAIR THE STRUCTURE AS NEEDED OR CONSTRUCT A NEW SYSTEM.

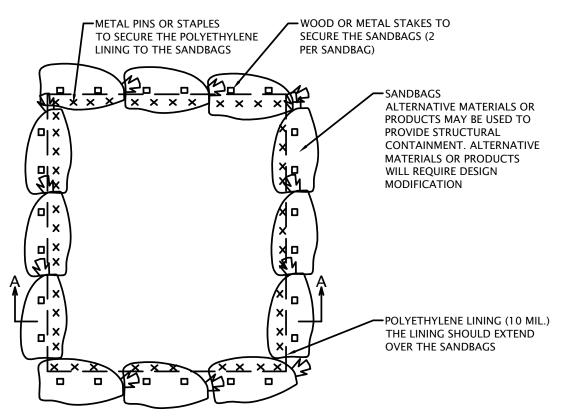
DISPOSE OF ALL CONCRETE IN A LEGAL MANNER. REUSE THE MATERIAL ON SITE, RECYCLE, OR HAUL THE MATERIAL TO AN APPROVED CONSTRUCTION/DEMOLITION LANDFILL SITE. RECYCLING OF MATERIAL IS ENCOURAGED. THE WASTE MATERIAL CAN BE USED FOR MULTIPLE APPLICATIONS INCLUDING BUT NOT LIMITED TO ROADBEDS AND BUILDING. THE AVAILABILITY FOR RECYCLING SHOULD BE CHECKED LOCALLY. THE PLASTIC LINER SHOULD BE REPLACED AFTER EVERY CLEANING; THE REMOVAL OF MATERIAL WILL USUALLY DAMAGE THE LINING

THE CONCRETE WASHOUT SYSTEM SHOULD BE REPAIRED OR ENLARGED AS NECESSARY TO MAINTAIN CAPACITY FOR CONCRETE WASTE CONCRETE WASHOUT SYSTEMS ARE DESIGNED TO PROMOTE EVAPORATION. HOWEVER, IF THE LIQUIDS DO NOT EVAPORATE AND THE SYSTEM IS NEAR APACITY IT MAY BE NECESSARY TO VACUUM OR REMOVE THE LIQUIDS AND DISPOSE OF THEM IN AN ACCEPTABLE METHOD. DISPOSAL MAY BE ALLOWED AT THE LOCAL SANITARY SEWER AUTHORITY PROVIDED THEIR NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM PERMITS ALLOW FOR ACCEPTANCE OF THIS MATERIAL. ANOTHER OPTION WOULD BE TO UTILIZE A SECONDARY CONTAINMENT SYSTEM OR BASIN FOR FURTHER DEWATERING

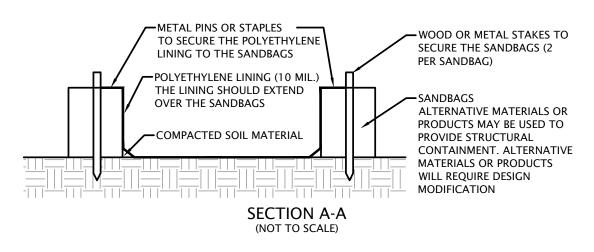
9. INSPECT CONSTRUCTION ACTIVITIES ON A REGULAR BASIS TO ENSURE SUPPLIERS, CONTRACTORS, AND OTHERS ARE UTILIZING DESIGNATED WASHOUT AREAS. IF CONCRETE WASTE IS BEING DISPOSED OF IMPROPERLY, IDENTIFY THE VIOLATORS AND TAKE APPROPRIATE ACTION.

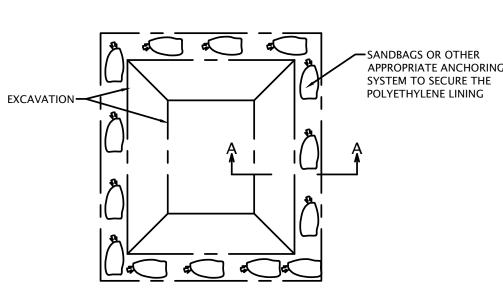
10. WHEN CONCRETE WASHOUT SYSTEMS ARE NO LONGER REQUIRED, THE CONCRETE WASHOUT SYSTEMS SHALL BE CLOSED. DISPOSE OF ALL HARDENED CONCRETE AND OTHER MATERIALS USED TO CONSTRUCT THE SYSTEM.

11. HOLES, DEPRESSIONS, AND OTHER LAND DISTURBANCES ASSOCIATED WITH THE SYSTEM SHOULD BE BACKFILLED, GRADED, AND STABILIZED.

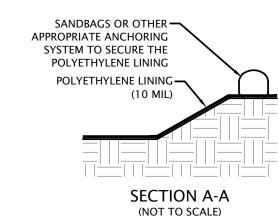


ABOVE GRADE CONCRETE WASHOUT





BELOW GRADE CONCRETE WASHOUT (NOT TO SCALE)



COMMON CONCERNS:

COMPLETE CONSTRUCTION/INSTALLATION OF THE SYSTEM AND HAVE WASHOUT LOCATIONS OPERATIONAL PRIOR TO CONCRETE DELIVERY . IT IS RECOMMENDED THAT WASHOUT SYSTEMS BE RESTRICTED TO WASHING CONCRETE FROM MIXER AND PUMP TRUCKS AND NOT USED TO DISPOSE OF EXCESS CONCRETE OR RESIDUAL LOADS DUE TO POTENTIAL TO EXCEED THE DESIGN CAPACITY OF THE WASHOUT SYSTEM.

INSTALL SYSTEMS AT STRATEGIC LOCATIONS THAT ARE CONVENIENT AND IN CLOSE PROXIMITY TO WORK AREAS AND IN SUFFICIENT NUMBER TO ACCOMMODATE THE DEMAND FOR DISPOSAL

4. INSTALL SIGNAGE IDENTIFYING THE LOCATION OF CONCRETE WASHOUT SYSTEMS.

FRYEFLOW FILTRATION SYSTEMS WASHOUT

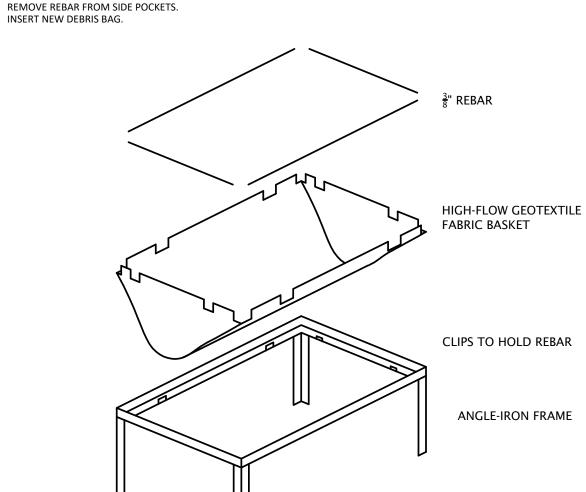
FRYE-FLOW FILTRATION SYSTEMS CONCRETE WASHOUT DEVICE OR APPROVED EQUAL

INSTALLATION: INSERT REBAR INTO POCKETS OF DEBRIS BAG.

INSTALL FRYEFLOW SYSTEMS DEBRIS BAG INTO ANGLE IRON FRAME. MAKE SURE REBAR SETS BEHIND REBAR BRACKETS.

MAKE SURE FRAME AND BAG IS SET ON FLAT SURFACE INSTALL SIGNAGE THAT IDENTIFIES CONCRETE WASHOUT AREAS. WHERE NECESSARY, PROVIDE STABLE INGRESS AND EGRESS OR ALTERNATIVE APPROACH PAD.

ONCE DEBRIS BAG IS FULL, USE HANDLES PROVIDED TO LIFT OUT OF FRAME



SPILL PREVENTION AND CONTROL PLAN

ONLY APPROVED FUEL STORAGE TANK SHALL BE ALLOWED ON SITE.

SPILL KITS MUST BE LOCATED ON-SITE IN THE VICINITY OF THE FUEL STORAGE SINK.

MOBILE FUELING SHALL BE USED WHENEVER POSSIBLE. FUELING SHOULD TAKE PLACE IN A CENTRAL LOCATION.

EQUIPMENT SHOULD BE KEPT IN GOOD WORKING ORDER, WELL MAINTAINED SO THAT BREAKDOWNS, AND EQUIPMENT FAILURES ARE

FUEL STORAGE

ALL FUEL TANKS ON SITE SHALL HAVE SECONDARY CONTAINMENT APPROVED BY IDEM.

NO FUEL TANKS ARE TO BE LOCATED WITHIN 100 FEET OF A STORM SEWER INLET. FUEL STORAGE SYSTEM SHALL BE KEPT IN GOOD WORKING ORDER AND SHALL BE SUBJECT TO PERIODIC IDEM INSPECTIONS.

4. SPILL KITS MUST BE LOCATED ON-SITE IN THE VICINITY OF THE FUEL STORAGE SINK. 5. FUEL TANKS SHALL HAVE A SAFETY GAUGE.

STOCKPILES

1. THE CONTRACTOR SHALL LOCATE TOPSOIL STOCKPILES ON-SITE AS NOTED ON THE S.W.P.P.P. AND SHALL ENCOMPASS EACH WITH

SEDIMENT DITCH AND SILT FENCE. IN CASES WHERE THE STOCKPILE IS SMALL AND WILL BE REMOVED FROM THE SITE WITHIN 15 DAYS, THE CONTRACTOR CAN COVER THE

STOCKPILE WITH A WATERPROOF TARPAULINE TYPE COVER. NO OFF-SITE STOCKPILES ARE BEING PROPOSED. ANY OFF-SITE STOCKPILES THAT THE CONTRACTOR UTILIZES SHALL FOLLOW THE SAME REQUIREMENTS AS ON-SITE STOCKPILES. THE CONTRACTOR SHALL IDENTIFY TO THE LOCAL S.W.P.P.P. ENFORCEMENT AGENCY THE LOCATIONS OF ANY OFF-SITE STOCKPILES.

TEMPORARY FACILITIES

CHEMICAL SETTLING FILTERS.

THE CONTRACTOR SHALL FOLLOW THE PROCEDURES DELINEATED ON THE PLAN IN ORDER TO CONSTRUCT AND MAINTAIN THE

FACILITIES SHOWN ON THE DRAWINGS TO CONTROL WATER AND WIND EROSION DURING CONSTRUCTION OF THE PROJECT. ALL DISTURBED SURFACE AREAS (INCLUDING UTILITY TRENCHES) SHALL BE TEMPORARILY GRADED AND/OR DITCHED TO DIRECT WATER RUNOFF FROM SUCH AREAS TO SEDIMENTATION CONTROL DEVICES WHICH WILL PREVENT DISTURBING ERODED WATER CARRYING SOIL FROM ENTERING A WATERCOURSE, SEWER, OR ADJACENT LANDS. SUCH SEDIMENTATION CONTROL DEVICES SHALL INCLUDE BUT NOT BE LIMITED TO PROTECTIVE DITCHES, SEDIMENT TRAPS, SEDIMENT FILTERS, DITCH TRAPS, PIPE BARRIERS, SIKE DIKES, CHECK DAMS,

UPON COMPLETION OF THE ROUGH GRADING ALL AREAS NOT EFFECTED BY CONSTRUCTION TRAFFIC SHALL BE PERMANENTLY SEEDED,

AND EROSION CONTROL BLANKETS INSTALLED ON SIDE SLOPES THAT EXCEED 5:1. UPON COMPLETION OF THE STORM SEWER SYSTEM, INLET PROTECTION SHALL BE INSTALLED, CHECK DAMS INSTALLED IN THE SWALES, AND TEMPORARY RIPRAP WITH SETTLING BASINS PLACED AT THE OUTFALLS OF ALL PIPE.

IN ROADWAY AREAS TEMPORARY AGGREGATE SURFACING SHALL BE PLACED IMMEDIATELY AFTER THE BACKFILLING HAS BEEN COMPLETED. POSITIVE DUST CONTROL MEASURES SHALL BE TAKEN AT ALL TIMES.

WITHIN 14 DAYS FROM THE DATE A PROJECT IMPROVEMENT IS INSTALLED THE CONTRACTOR SHALL PROCEED WITH FINAL CLEANUP AND RESTORATION OF THE PROJECT AREA DISTURBED INCLUDING SPOIL AREAS, AND COMPLETE SUCH OPERATIONS WITHIN THE NEXT 15 DAYS. IF SEASONAL CONDITIONS PREVENT FINAL CLEANING AND RESTORATION, THE CONTRACTOR SHALL PROCEED WITH TEMPORARY STABILIZATION OF THE DISTURBED AREAS. FINAL CLEANUP AND RESTORATION WILL CONSIST OF FINAL GRADING, APPLYING TOPSOIL, SEEDING AND MUI CHING AND/OR SODDING OF ALL DISTURBED AREAS OF THE PROJECT, TEMPORARY STABILIZATION SHALL CONSIST OF ROUGH GRADING THE DISTURBED AREAS TO A CONDITION READY TO RECEIVE TOPSOIL, SEEDING, AND MULCHING IN ACCORDANCE WITH THE TEMPORARY SEEDING SCHEDULE. TEMPORARY STABILIZATION MATERIALS SHALL BE REMOVED, DISPOSED OF, AND FINAL CLEANUP AND RESTORATION SHALL BE COMPLETED NOT LATER THAN 60 DAYS AFTER SEASONAL CONDITIONS ALLOW PERFORMANCE OF THE REQUIRED WORK. THE CONTRACTOR SHALL LOCATE TOPSOIL STOCKPILES ON-SITE AS NOTED ON THE S.W.P.P.P. AND SHALL ENCOMPASS EACH WITH SEDIMENT DITCH AND SILT FENCE. IN CASES WHERE THE STOCKPILE IS SMALL AND WILL BE REMOVED FROM THE SITE WITHIN 15 DAYS, THE CONTRACTOR CAN COVER THE STOCKPILE WITH A WATERPROOF TARPAULINE TYPE COVER. NO OFF-SITE STOCKPILES ARE BEING PROPOSED. ANY OFF-SITE STOCKPILES THAT THE CONTRACTOR UTILIZES SHALL FOLLOW THE SAME REQUIREMENTS AS ON-SITE STOCKPILES. THE CONTRACTOR SHALL IDENTIFY TO THE LOCAL S.W.P.P.P. ENFORCEMENT AGENCY THE LOCATIONS OF ANY OFF-SITE STOCKPILES.

MATERIAL HANDLING AND STORAGE

THE CONTRACTOR SHALL MINIMIZE THE DISTURBANCE OF EXCAVATED SOILS BY MINIMIZING THE NUMBER OF TIMES THE SOIL IS HANDLED ON-SITE HANDLING OF SOILS WILL OCCUR DURING EXCAVATION, LOADING, AND SPREADING ACTIVITIES. FUEL FOR HEAVY EQUIPMENT AND VEHICLES WILL NOT BE STORED ON THE SITE DURING CONSTRUCTION OPERATIONS. MOBILE FUEL TANKS WILL FUEL HEAVY EQUIPMENT. IN THE EVENT OF A SPILL OR LEAK THE CONTRACTOR SHALL FOLLOW PROPER PROCEDURES TO MINIMIZE CONCERN. THE CONTRACTOR SHALL:

TAKE IMMEDIATE MEASURES TO CONTROL AND CONTAIN THE SPILL TO PREVENT RELEASE INTO SEWERS OR SURFACE WATERS.

NOTIFY THE LOCAL FIRE DEPARTMENT IMMEDIATELY AT 9-1-1.

NOTIFY THE FEDERAL EMERGENCY SPILL HOTLINE AT 1-800-424-8802 WITHIN 2 HOURS IF THE AMOUNT IS ABOVE A REPORTABLE OUANTITY OR ANY AMOUNT ENTERS A WATERWAY OR STORM SEWER.

NOTIFY THE INDIANA EMERGENCY RESPONSE HOTLINE AT 1-888-233-7745. FOLLOW THE GUIDELINES FOR HANDLING THE SPILL AS OUTLINED IN THE INCLUDED MATERIAL SAFETY DATA SHEETS.

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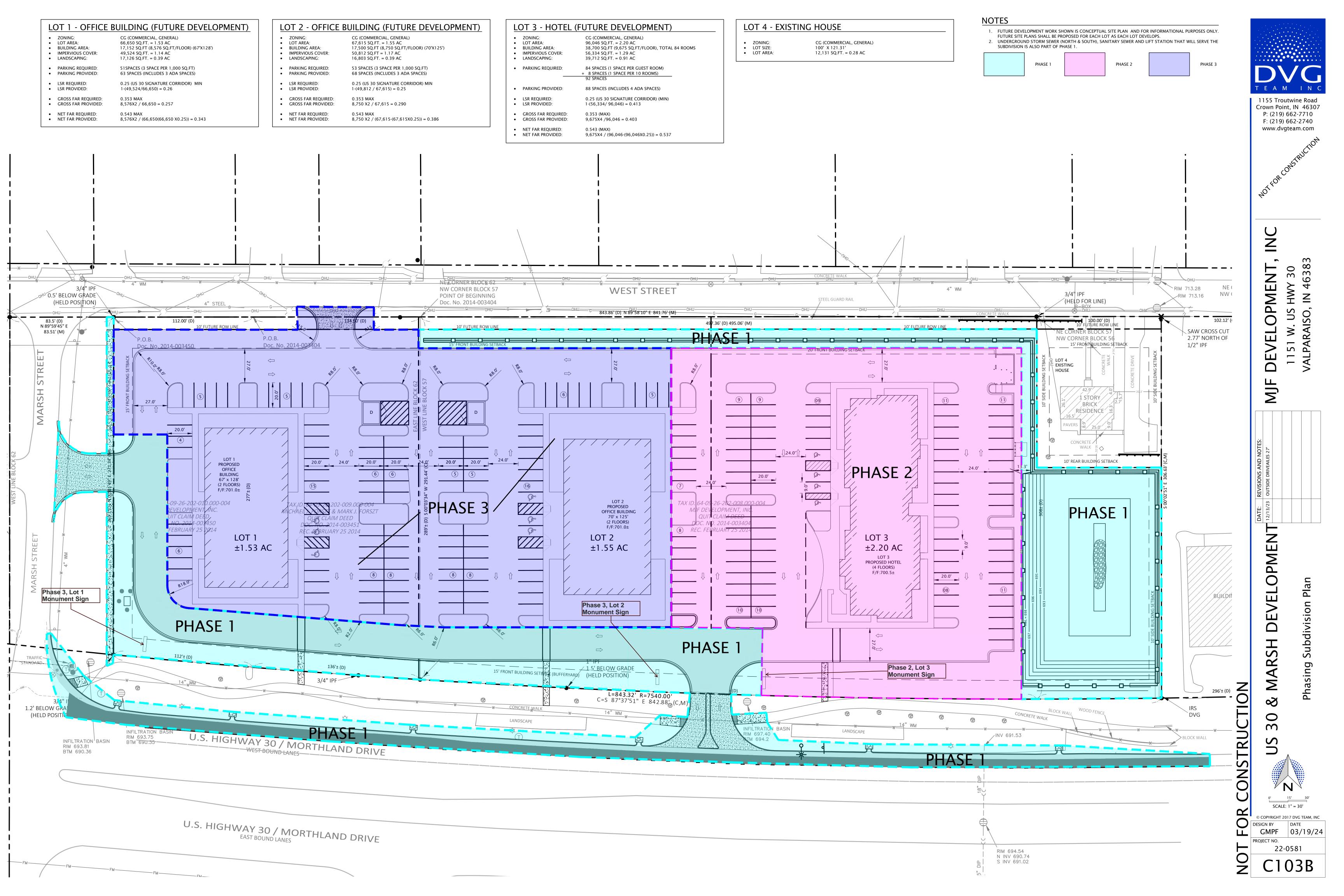
1155 Troutwine Road

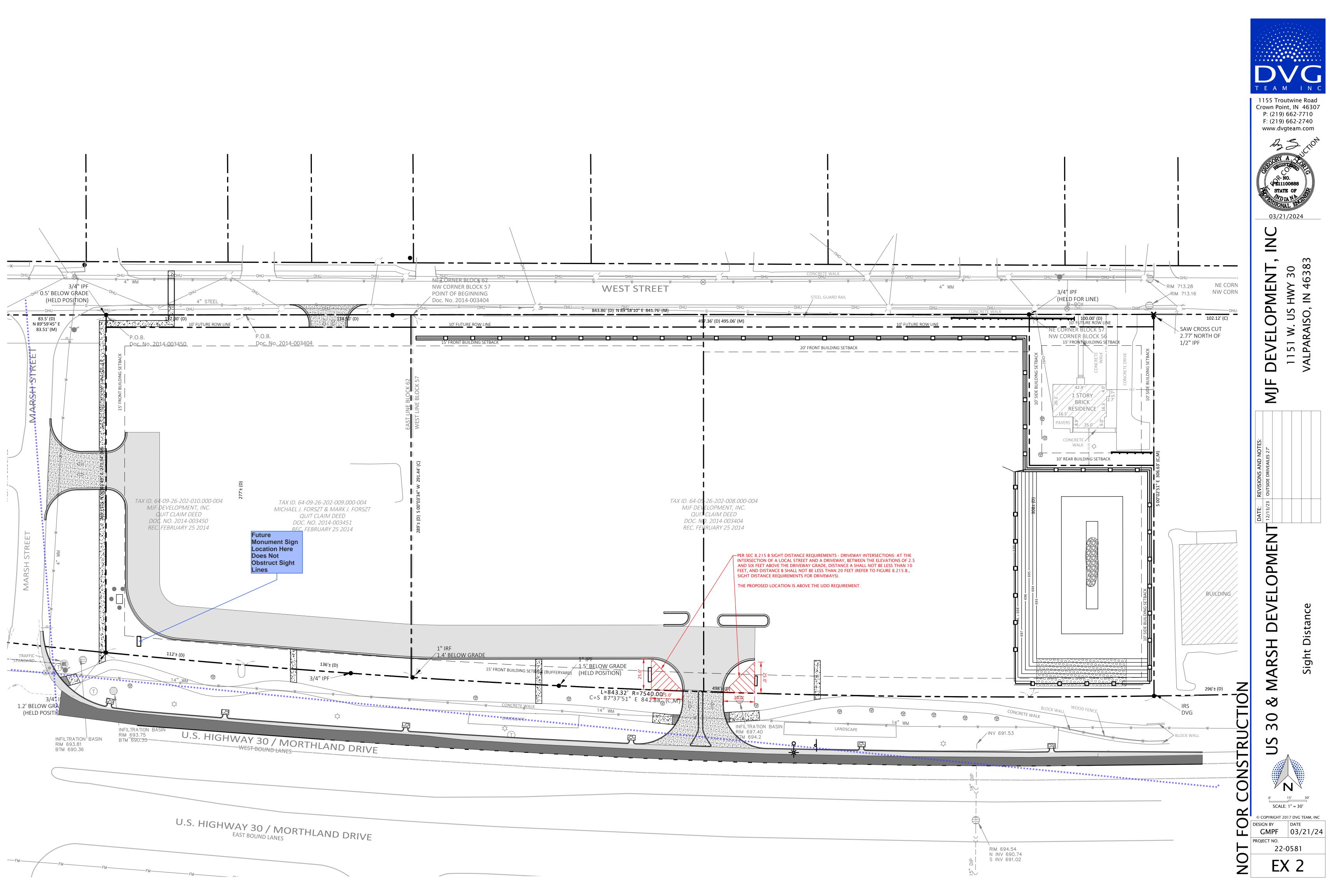
Crown Point, IN 46307 P: (219) 662-7710

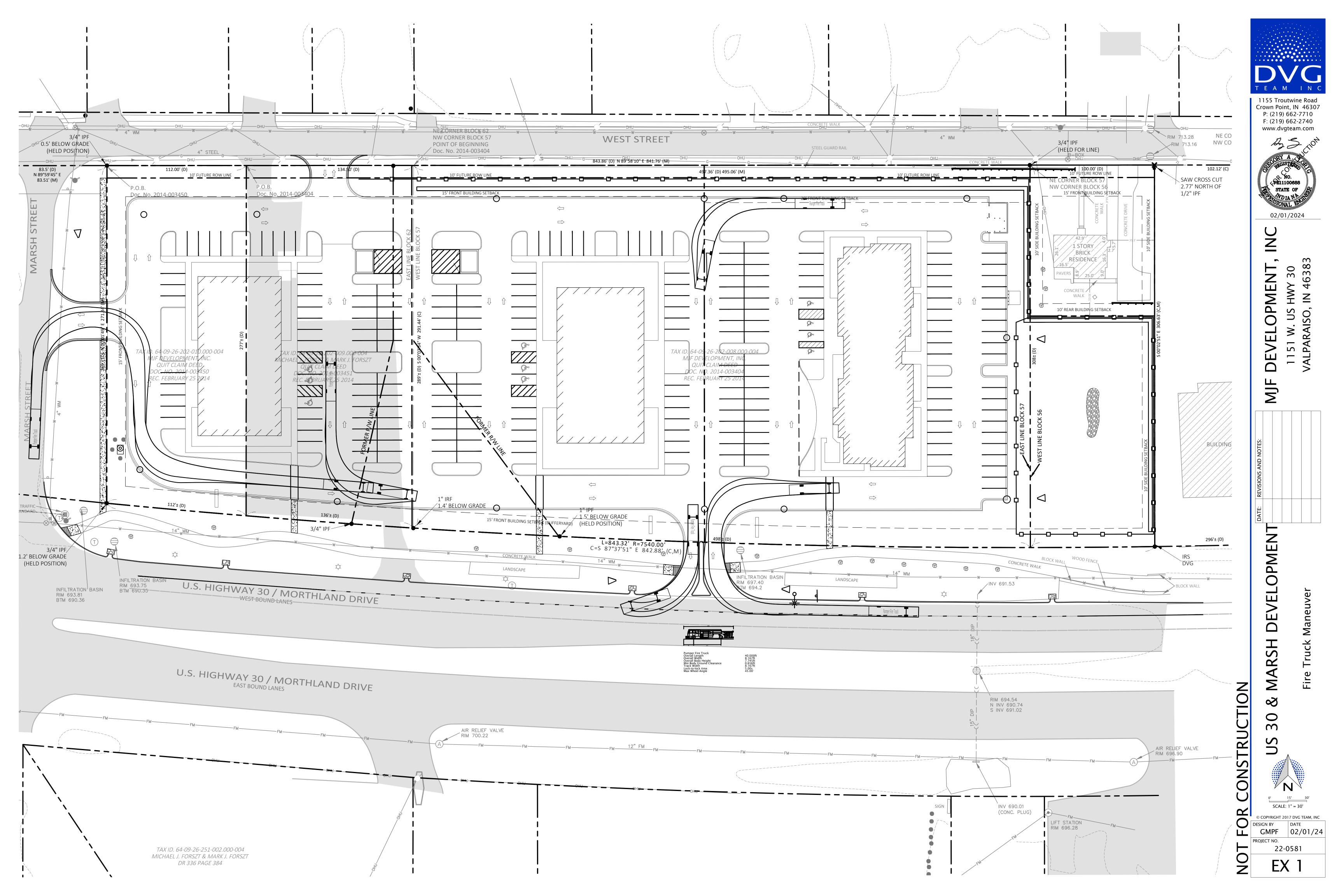
F: (219) 662-2740

www.dvgteam.com

03/21/2024







DECLARATION OF RECIPROCAL EASEMENTS

	CIPROCAL EASEMENTS ("Declaration") is made and, 2024, by MJF Development, Inc., an Indiana	
WITNESSETH:		
	d off and platted a four lot subdivision recorded in Plat File in the Office of the Recorder of Porter County, Indiana	
WHEREAS, there are certain infra	astructure items benefitting the lots in the Subdivision and	

WHEREAS, the Declarant desires impose and create certain easements upon the Subdivision and parcels, and to establish certain covenants, conditions, and restrictions with respect to the Subdivision, for the mutual and reciprocal benefit and complement of the Subdivision and the

present and future owners and occupants thereof, on the terms and conditions hereinafter set forth.

the owners thereof, including, but not limited to access driveways to public rights of way, parking, storm water infrastructure, sanitary sewer infrastructure, retaining walls, and landscaping

improvements located or to be located within the Subdivision;

NOW THEREFORE, in consideration of the above premises, good and valuable consideration, and the covenants herein contained, the Declarant hereby covenant and agree that the Subdivision, and lots therein, and all present and future owners and occupants of said parcels shall be and are hereby subject to the terms, covenants, easements, restrictions, and conditions hereinafter set forth in this Declaration, so that said parcels shall be maintained, kept, sold and used in full compliance with and subject to this Declaration and, in connection therewith, the parties hereto on behalf of themselves and their respective successors and assigns covenant and agree as follows:

1. Definitions. For purposes hereof:

(a) The term "Owner" or "Owners" shall mean the Declarant and any and all successors or assigns of such persons as the owner or owners of fee simple title to all or any portion of the Subdivision covered hereby, whether by sale, assignment, inheritance,

- operation of law, sheriff or judicial sale, foreclosure, or otherwise, but not including the holder of any lien or encumbrance on such real property.
- (b) The term "Parcel" or "Parcels" shall mean each separately identified lots in the Subdivision of real property now constituting a part of the real property subjected to this Declaration as described in this Declaration, and any future subdivisions thereof.
- (c) The term "Permittees" shall mean the tenant(s) or occupant(s) of a Parcel, and the respective employees, agents, contractors, customers, invitees and licensees of (i) the Owner of such Parcel, and (ii) such tenant(s) or occupant(s).
- (d) The term "Common Area" shall mean those common areas or parcels depicted on the plat of the Subdivision and those portions of the Parcels that are outside of exterior walls of buildings or other structures from time to time located on the Parcels, and which are either unimproved, or are improved, as (without limitation) parking areas, detention areas, storm sewers, sanitary sewers, lift station, landscaped areas, driveways, roadways, walkways, light standards, curbing, paving, entrances, exits and other similar exterior site improvements depicted on the Site Plan and/or plat of Subdivision.
- (e) The term "Site Plan" shall mean that site plan of the Parcels attached hereto as Exhibit "A" and by reference made a part hereof. Except as may be otherwise provided in this Declaration, the Site Plan is for identification purposes only.
- (f) The term "Driveway" shall mean that driveway and related driveway improvements, paving, curbing, entrances and exits, in the location on the Parcels as shown on the Site Plan.

2. Easements.

- (a) Grant of Reciprocal Easements. Subject to any express conditions, limitations or reservations contained herein, the Declarant hereby grant, establish, covenant and agree that the Parcels, and all Owners and Permittees of the Parcels, shall be benefitted and burdened by the following nonexclusive, perpetual and reciprocal easements which are hereby imposed upon the Parcels and all present and future Owner's and Permittees of the Parcels:
 - (i) Access and Parking. An easement for access, ingress and egress and parking over all paved driveways, roadways and walkways as presently or hereafter constructed and constituting a part of the Common Area of a Parcel to provide for the passage of motor vehicles and pedestrians between all portions of the Common Area of such Parcels intended for such purposes,

and to and from all abutting streets or rights of way furnishing access to such Parcels.

- (ii) <u>Storm Water</u>. An easement to drain surface water and pipe storm water onto, across, over, under and through the Parcels over all paved driveways, roadways and walkways as presently or hereafter constructed and constituting a part of the Common Area of a Parcel.
- (iii) <u>Sanitary Sewer</u>. An easement for sanitary sewers under and through the Parcels over all paved driveways, roadways and walkways as presently or hereafter constructed and constituting a part of the Common Area of a Parcel.

Notwithstanding anything to the contrary herein, the upkeep, maintenance and repair (including without limitation) operation and maintenance of the sanitary lift station, regular and exigent circumstances, for the Subdivision shall be undertaken by the Owner of Lot 3 of the Subdivision in its sole discretion. The costs and expenses incurred arising from this section shall be considered common expenses and paid by all Owners as required herein.

- (iv) <u>Lot 4 Retaining Wall</u>. An easement on Lot 4 as shown on the Plat is hereby created for the location of, upkeep, repair and maintenance of the retaining wall and related improvements for the Subdivision.
- (v) <u>Implied Rights</u>. The easements granted herein shall include the right of ingress and egress to install, inspect, maintain, repair, and replace the infrastructure and related improvements for access, storm sewer, sanitary sewer and other facilities related thereto located on the Parcels and all other necessary or incidental uses of the Parcels for the full enjoyment of the rights granted herein; provided, however, that any such use shall not restrict, burden or reduce any portion of an easement, and should any party undertake such installation, maintenance, repair, or replacement, the party undertaking the same shall restore, as near as practical, the surface of the Parcels to the same condition as it was prior to entry and disturbance thereof.
- (b) <u>Indemnification</u>. Each Owner having rights with respect to an easement granted hereunder shall indemnify and hold the Owner whose Parcel is subject to the easement harmless from and against all claims, liabilities and expenses (including reasonable attorneys' fees) relating to accidents, injuries, loss, or damage of or to any person or property arising from the negligent, intentional or willful acts or omissions of such Owner, its contractors, employees, agents, or others acting on behalf of such Owner.

(c) Reasonable Use of Easements.

- (i) The easements herein above granted shall be used and enjoyed by each Owner and its Permittees in such a manner so as not to unreasonably interfere with, obstruct or delay the conduct and operations of the business of any other Owner or its Permittees at any time conducted on its Parcel, including, without limitation, public access to and from said business, and the receipt or delivery of merchandise in connection therewith. Parking shall occur in the striped parking areas only.
- (ii) No permanent building, structures, trees or other improvements inconsistent with the use and enjoyment of such easements (except as contemplated by the Site Plan) shall be placed over or permitted to encroach upon such ingress and egress easements, storm drainage or sanitary installations.
- (iii) Once commenced, any construction undertaken in reliance upon an easement granted herein shall be diligently prosecuted to completion, so as to minimize any interference with the business of any other Owner and its Permittees. Except in cases of emergency, the right of any Owner to enter upon a Parcel of another Owner for the exercise of any right pursuant to the easements set forth. or to prosecute work on such Owner's own Parcel if the same interferes with drainage easements or easements of ingress, egress or access to or in favor of another Owner's Parcel, shall be undertaken only in such a manner so as to minimize any interference with the business of the other Owner and its Permittees. In such case, no affirmative monetary obligation shall be imposed upon the other Owner, and the Owner undertaking such work shall with due diligence repair at its sole cost and expense any and all damage caused by such work and restore the affected portion of the Parcel upon which such work is performed to a condition which is equal to or better than the condition which existed prior to the commencement of such work. In addition, the Owner undertaking such work shall pay all costs and expenses associated therewith and shall indemnify and hold harmless the other Owner(s) and its Permittees from all damages, losses, liens or claims attributable to the performance of such work.

3. Maintenance.

- (a) <u>General</u>. Subject to the terms of this Declaration, the Owners of Parcels shall maintain the same in a clean and neat condition and shall take such measures as are necessary to control grass, weeds, blowing dust, dirt, litter or debris.
- (b) <u>Buildings and Appurtenances Thereto</u>. Each Owner covenants to keep and maintain, at its sole cost and expense, the building(s) located from time to time on its respective Parcel in good order, condition and repair. Once constructed, in the event of any

damage to or destruction of a building on any Parcel, the Owner of such Parcel shall, at its sole cost and expense, with due diligence either (i) repair, restore and rebuild such building to its condition prior to such damage or destruction (or with such changes as shall not conflict with this Declaration), or (ii) demolish and remove all portions of such damaged or destroyed building then remaining, including the debris resulting therefrom, and otherwise clean and restore the area affected by such casualty to a level, graded condition.

(c) Common Area. Each Owner of a Parcel covenants at all times during the term hereof to operate and maintain or cause to be operated and maintained at its expense all parts of its Parcel located outside the Common Area located on its Parcel in good order. condition and repair. Maintenance of Common Area shall include, without limitation, maintaining and repairing all sidewalks and the surface of the parking and roadway areas, maintenance, repair and replacement of storm drainage facilities and detention areas, removing all papers, debris and other refuse from and periodically sweeping all parking and road areas to the extent necessary to maintain the same in a clean, safe and orderly condition, maintaining marking, directional signs, lines and striping as needed, maintaining landscaping, maintaining signage in good condition and repair, and performing any and all such other duties as are necessary to maintain such Common Area in a clean, safe and orderly condition. The Owner of each Parcel, hereby covenants and each Owner of a Parcel (by acceptance of a deed therefor, whether or not it shall be so expressed in any such deed or other conveyance) including any purchaser at a judicial sale, shall hereafter be deemed to covenant and agree to pay their proportionate share of the cost and expense of the repair, maintenance, upkeep and replacement of the Common Area. Proportionate Share shall be equal to one-third (1/3) and Lot 4 shall be exempt from these expenses. This obligation shall include, without limiting the generality of the foregoing, repair and replacement of lift station equipment, sanitary sewers, storm sewers, retaining wall, common area detention mowing and clearing, the removal of snow and ice as well as the patching, the adding of new stone aggregate and grading or maintenance and repair of the asphaltic surface as the case may be. The obligation herein shall be shared equally, one third (1/3) for the Owners of Lot 1, 2 and 3 without regard to the size of individual Parcels, area of Common Area on the respective Parcels, or use or nonuse of the Common Area by the Owners. The easements granted herein shall include the areas immediately adjacent to the Common Area on the Lots as reasonably required by the Owners of Parcels to effectuate the maintenance, repair and replacement of the Common Area or subsequently installed similar improvements. Decisions regarding the repair, maintenance, upkeep and replacement shall be made by the Declarant in its sole discretion so long as the Declaration is a Owner of a Lot in the Subdivision, and thereafter a vote of a majority of the then Owners of the Parcels with each Parcel being entitled to one (1) vote, regardless of the number of joint owners of each Parcel. Such decisions shall include a determination of the work to be performed and the selection of the representative to oversee to the performance of such work. No owner shall be compensated for time spent in oversight of the work performed. Should the parties fail to agree on the work to be undertaken with respect to the Common Area, said failure shall be deemed a default of this Declaration and the matter shall be decided in accordance with the provisions for default provided for in this Declaration.

- 4. <u>Insurance</u>. Throughout the term of this Declaration, each Owner shall procure and maintain general and comprehensive public liability and property damage insurance against claims for personal injury (including contractual liability arising under the indemnity contained in paragraph 2(b) above), death, or property damage occurring upon such Owner's Parcel, with single limit coverage of not less than an aggregate of Two Million Dollars (\$2,000,000.00) including umbrella coverage, if any, and naming each other Owner (provided the Owner obtaining such insurance has been supplied with the name of such other Owner in the event of a change thereof) as additional insureds.
- 5. <u>Taxes and Assessments.</u> Each Owner shall pay all taxes, assessments, or charges of any type levied or made by any governmental body or agency with respect to its Parcel.
- 6. <u>No Rights in Public; No Implied Easements</u>. Nothing contained herein shall be construed as creating any rights in the general public or as dedicating for public use any portion of the Parcels, nor for any easements, except those expressly set forth in this Declaration.

7. Remedies and Enforcement.

- (a) <u>All Legal and Equitable Remedies Available</u>. In the event of a breach or threatened breach by any Owner or its Permittees of any of the terms, covenants, restrictions or conditions hereof, the other Owner(s) shall be entitled forthwith to full and adequate relief by injunction and all such other available legal and equitable remedies from the consequences of such breach, including payment of any amounts due and specific performance.
- (b) Self-Help. In addition to all other remedies available at law or in equity, upon the failure of a defaulting Owner to cure a breach of this Declaration within thirty (30) days following written notice thereof by an Owner (unless, with respect to any such breach the nature of which cannot reasonably be cured within such 30-day period, the defaulting Owner commences such cure within such 30-day period and thereafter diligently prosecutes such cure to completion), any Owner shall have the right to perform such obligation contained in this Declaration on behalf of such defaulting Owner and be reimbursed by such defaulting Owner upon demand for the reasonable costs thereof together with interest at the prime rate as provided for in the Wall Street Journal, or its equivalent, from time to time, plus two percent (2%) (not to exceed the maximum rate of interest allowed by law). Notwithstanding the foregoing, in the event of (i) an emergency, (ii) blockage or material impairment of the easement rights, and/or (iii) the unauthorized parking of vehicles, an Owner may immediately cure the same and be reimbursed by the other Owner upon demand for the reasonable cost thereof together with interest at the prime rate, plus two percent (2%), as above described.

- (c) Lien Rights. Any claim for reimbursement, including interest as provided for in this Declaration or enforcement action of any kind, and all costs and expenses including reasonable attorneys' fees awarded to any Owner in enforcing any payment or equitable action in any suit or proceeding arising from or related to this Declaration shall be assessed against the defaulting Owner in favor of the prevailing party and shall constitute a lien (the "Assessment Lien") against the Parcel of the defaulting Owner until paid, effective upon the recording of a notice of lien with respect thereto in the Office of the County Recorder of Lake County, Indiana, provided, however, that any such Assessment Lien shall be subject and subordinate to (i) liens for taxes and other public charges which by applicable law are expressly made superior, and (ii) all liens recorded in the Office of the County Recorder of Lake County, Indiana prior to the date of recordation of said notice of lien. All liens recorded subsequent to the recordation of the notice of lien described herein shall be junior and subordinate to the Assessment Lien. Upon the timely curing by the defaulting Owner of any default for which a notice of lien was recorded, the party recording same shall record an appropriate release of such notice of lien and Assessment Lien. The Assessment Lien may be enforced in the same manner as provided under the then existing Indiana Mechanic's Lien Law. Upon a transfer of title to any Parcel, the grantee shall be jointly and severally liable for any repair, maintenance, upkeep and replacement assessed and other charges due at the time of conveyance. The obligation to pay as required by this agreement is a separate, independent and personal covenant on the part of each owner of a Parcel. No sale, transfer or proceeding in lieu of foreclosure shall relieve any owner(s) or Parcel(s) from personal liability for their respective share of the costs repair, maintenance, upkeep and replacement of the private roadway or incurred to enforce this Declaration.
- (d) <u>Remedies Cumulative</u>. The remedies specified herein shall be cumulative and in addition to all other remedies permitted at law or in equity, and each Owner expressly reserves any and all such rights and remedies.
- (e) <u>No Termination For Breach</u>. Notwithstanding the foregoing to the contrary, no breach hereunder shall entitle any Owner to cancel, rescind, or otherwise terminate this Declaration. No breach hereunder shall defeat or render invalid the lien of any mortgage or deed of trust upon any Parcel made in good faith for value, but the easements, covenants, conditions and restrictions hereof shall be binding upon and effective against any Owner of such Parcel covered hereby whose title thereto is acquired by foreclosure, trustee's sale, or otherwise.
- 8. <u>Term.</u> The easements, covenants, conditions and restrictions contained in this Declaration shall be effective commencing on the date of recordation of this Declaration in the Office of the County Recorder of Porter County, Indiana and shall remain in full force and effect thereafter in perpetuity, unless this Declaration is modified, amended, canceled or terminated by the written consent of all then record Owners of the 3491 Parcel and the 3493 Parcel.

9. Miscellaneous.

- (a) Attorneys' Fees. In the event that any party shall engage an attorney in connection with any action or proceeding (including without limitation intended, any arbitration proceeding) to enforce or construe this Declaration, the prevailing party in such action or proceeding shall be entitled to recover its reasonable attorneys' fees and disbursements. In the event different parties are the prevailing parties on different issues, the attorneys' fees and disbursements shall be apportioned in proportion to the value of the issues decided for and against the parties. For purposes of this Declaration, a prevailing party shall include, without limitation, a party who brings an action against the other party by reason of the other party's breach or default and obtains substantially the relief sought, whether by compromise, settlement or judgment.
- (b) <u>Amendment</u>. The parties agree that the provisions of this Declaration may be modified or amended, in whole or in part, or terminated, only by the written consent of all record Owners of a Parcel, evidenced by a document that has been fully executed and acknowledged by all such record Owners and recorded in the official records of the Office of the County Recorder of Porter County, Indiana.
- Consents. Wherever in this Declaration the consent or approval of any of the Parcels Owner is required, unless otherwise expressly provided herein, such consent or approval shall not be unreasonably withheld or delayed. Any request for consent or approval shall: (a) be in writing; (b) specify the section hereof which requires that such notice be given or that such consent or approval be obtained; and (c) be accompanied by such background data as is reasonably necessary to make an informed decision thereon. The consent of an Owner under this Declaration, to be effective, must be given, denied or conditioned expressly and in writing.
- (d) <u>No Waiver</u>. No waiver of any default of any obligation by any party hereto shall be implied from any omission by the other party to take any action with respect to such default.
- (e) <u>No Agency</u>. Nothing in this Declaration shall be deemed or construed by either party or by any third person to create the relationship of principal and agent or of limited or general partners or of joint venturers or of any other association between the parties.
- (f) <u>Covenants to Run with Land</u>. It is intended that each of the easements, covenants, conditions, restrictions, rights and obligations set forth herein shall run with the land and create equitable servitudes in favor of the real property benefited thereby, shall bind every person having any fee, leasehold or other interest therein and shall inure to the benefit of the respective parties and their successors, assigns, heirs, and personal representatives.
- (g) <u>Grantee's Acceptance</u>. The grantee of any Parcel or any portion thereof, by acceptance of a deed conveying title thereto or the execution of a contract for the purchase

thereof, whether from an original party or from a subsequent owner of such Parcel, shall accept such deed or contract upon and subject to each and all of the easements, covenants, conditions, restrictions and obligations contained herein. By such acceptance, any such grantee shall for himself and his successors, assigns, heirs, and personal representatives, covenant, consent, and agree to and with the other party, to keep, observe, comply with, and perform the obligations and agreements set forth herein with respect to the property so acquired by such grantee.

- (h) <u>Severability</u>. Each provision of this Declaration and the application thereof to the Parcels are hereby declared to be independent of and severable from the remainder of this Declaration. If any provision contained herein shall be held to be invalid or to be unenforceable or not to run with the land, such holding shall not affect the validity or enforceability of the remainder of this Declaration. In the event the validity or enforceability of any provision of this Declaration is held to be dependent upon the existence of a specific legal description, the parties agree to promptly cause such legal description to be prepared. Ownership of both Parcels by the same person or entity shall not terminate this Declaration nor in any manner affect or impair the validity or enforceability of this Declaration.
- (i) Time of Essence. Time is of the essence of this Declaration.
- (j) <u>Entire Agreement</u>. This Declaration contains the complete understanding and agreement of the parties hereto with respect to all matters referred to herein, and all prior representations, negotiations, and understandings are superseded hereby.
- (k) <u>Notices</u>. Notices or other communication hereunder shall be in writing and shall be sent certified or registered mail, return receipt requested, or by other national overnight courier company, or personal delivery and the address for notice shall be the address where the Porter County tax bill of the Parcel is registered.
- (l) <u>Governing Law</u>. The laws of the State of Indiana shall govern the interpretation, validity, performance, and enforcement of this Declaration. The parties agree that the Courts of Porter County, Indiana shall have exclusive jurisdiction over this Declaration and all causes of action or other enforcement actions shall be filed in the Courts of Porter County, Indiana.
- (m) <u>Estoppel Certificates</u>. Each Owner, within twenty (20) day of its receipt of a written request from the other Owner(s), shall from time to time provide the requesting Owner, a certificate binding upon such Owner stating: (a) to the best of such Owner's knowledge, whether any party to this Declaration is in default or violation of this Declaration and if so identifying such default or violation; and (b) that this Declaration is in full force and effect and identifying any amendments to the Declaration as of the date of such certificate.

(n) <u>Bankruptcy</u>. In the event of any bankruptcy affecting any Owner or occupant of any Parcel, the parties agree that this Declaration shall, to the maximum extent permitted by law, be considered an agreement that runs with the land and that is not rejectable, in whole or in part, by the bankrupt person or entity.

IN WITNESS WHEREOF, the Declarant has executed this Declaration as of the date first written above.

MJF	Development, Inc.
By:_	
· -	Mark J. Forszt, President
STATE OF)	
COUNTY OF)	
Before me, the undersigned, a Notary Public in appeared Michael J. Forszt, President of MJF execution of the foregoing Declaration as his dul this day of, 2024.	Development, Inc. and acknowledged the y authorized and free act. Signed and sealed
	Notary Public
	Printed
	County of Residence:
	My Commission Expires:

I affirm, under the penalties for perjury, that I have taken reasonable care to redact each social security number in this document, unless required by law. William A. Ferngren

This Instrument Prepared By And Return To: William A. Ferngren, Esq., Ferngren Law Offices, LLC, 570 Vale Park Road, Suite B, Valparaiso, Indiana 46385, (219) 771-0155, bill@ferngrenlaw.com