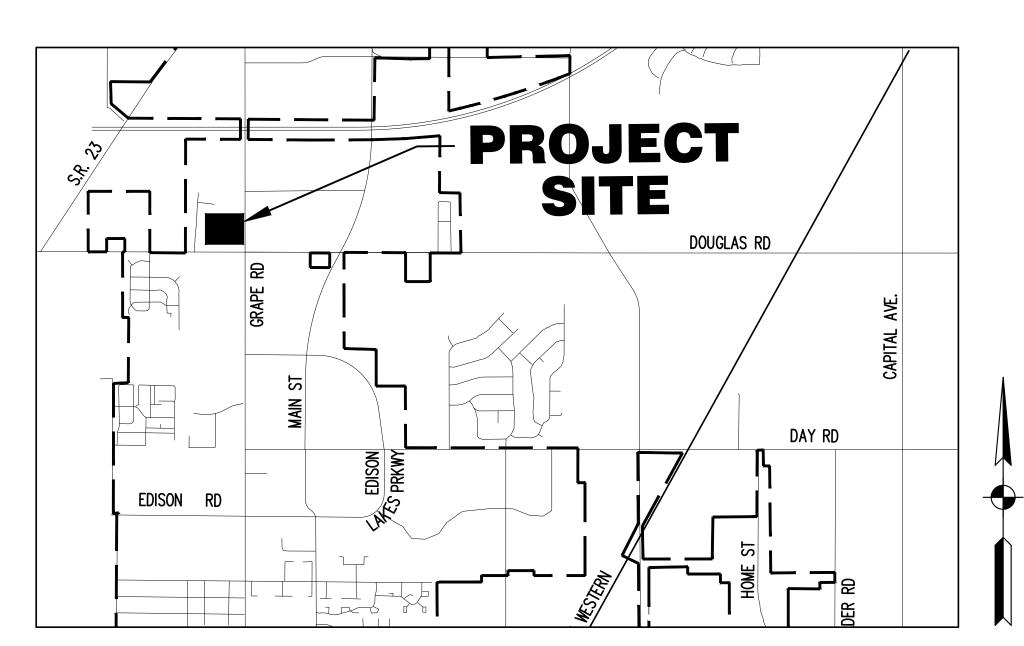
FINAL SITE DEVELOPMENT PLANS

FOR

TACO BELL

5505 GRAPE ROAD

SECTION 28, TOWNSHIP 38 NORTH, RANGE 3 EAST, CLAY TOWNSHIP, CITY OF MISHAWAKA, ST. JOSEPH COUNTY INDIANA

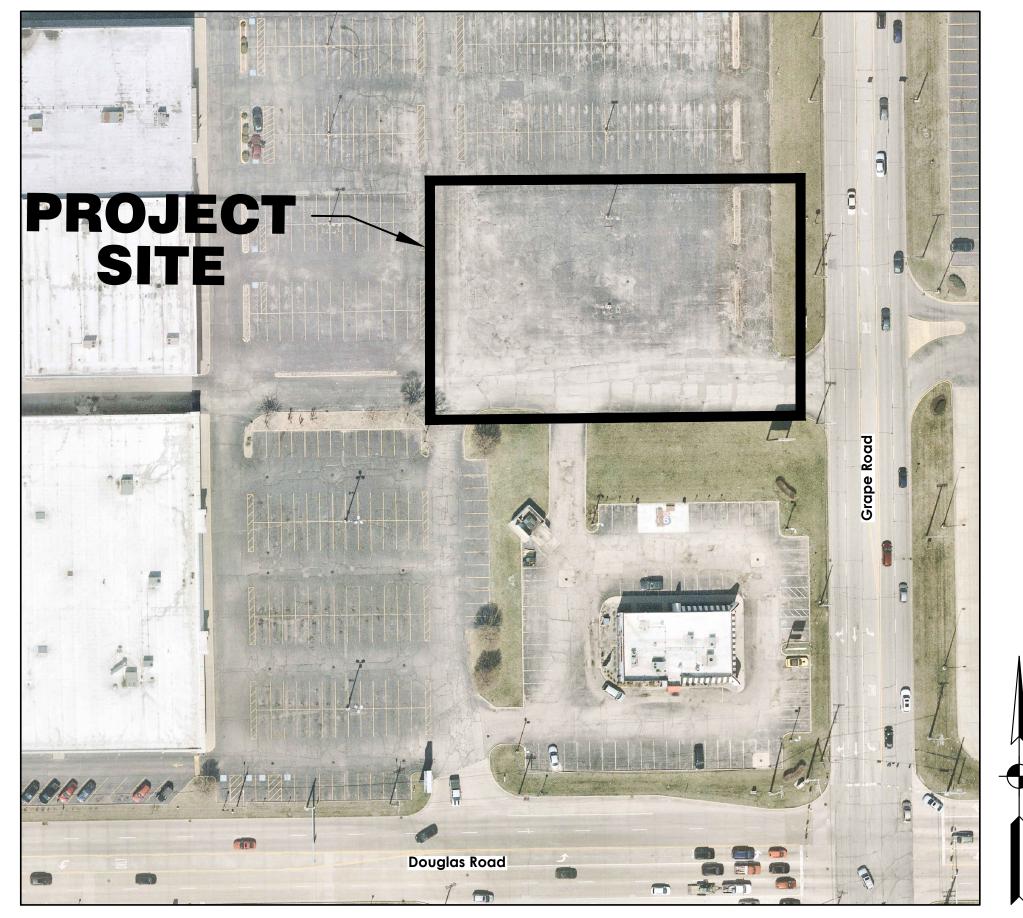


VICINITY MAP SCALE: 1"=2,000'

	UTILITY CONTACTS
Gas	NIPSCO 1039 East Pennsylvania Avenue, South Bend, IN 46601 Contact: Jonathan Erdahl (574) 800-6132
Electric	Mishawaka Utilities, Electric Department 1646 East 12th Street, Mishawaka, IN 46544 Contact: Kevin Wasmer (574) 258—1717
Telephone	AT&T 307 South Main Street, South Bend, IN 46601 Contact: Thomas Pendergrass (574) 237-8822
Fiber Optics	Choicelight 130 South Main Street South Bend, IN 46601 Contact: Mary Jane Headman (574) 968—5432
Cable	Comcast 1920 E. McKinley Avenue, Mishawaka, IN 46545 Contact: Jay Costello (574) 789—1039
Water	Mishawaka Utilities, Water Department 401 East Jefferson Boulevard, Mishawaka, IN 46545 Contact: Dave Majewski (574) 258–1652
Sewer, Streets	City of Mishawaka Engineering Department 600 East 3rd Street, Mishawaka, IN 46544 Contact: Christine Jamrose, PE (574) 258—1619



Call 811 OR 1-800-382-5544 24 Hours a Day, 7 Days a Week



LOCATION MAP

SCALE: 1"=100'

SHEET INDEX			
Sheet Number	Description		
1	Cover Sheet & Index		
2-3	Plat		
4	Removals Plan		
5	Site Plan		
6	Drainage & Utility Plan		
7	Grading Plan		
8	Landscape Plan		
9	Lighting Plan		
10-12	Construction Details		

OWNER GW Properties

Chicago, IL 60614
(773) 382-0590
Contact: Mitch Goltz
mitch@gwproperties.com

PROPOSED DEVELOPER

Delight TB Indiana, LLC

120 East End Avenue, 10B

New York, NY 10028

(617) 233-7114

Contact: Rich Krumholz

rkrumholz@delightrg.com

SURVEYOR/CIVIL ENGINEER

Abonmarche Consultants, Inc.

315 West Jefferson Boulevard South Bend, IN 46601 (574) 232-8700 Contact: Mike Huber mhuber@abonmarche.com

2	PER CITY OF MISHAWAKA REVIEW COMMENTS	SAL	02
1	PER CITY OF MISHAWAKA REVIEW COMMENTS	PWW	0
	_		

Benton Harbor Lafayette
315 w. Jefferson Blvd.
South Bend, IN 46601
1 574.232.8700
F 574.251.4440
abonmarche.com
Copyricht 2021 - ABONNARCHE CONSULTANTS, INC.
Engineering - Architecture - Land Surveying

Taco Bell ishawaka, Indian

Cover Sheet

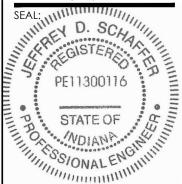
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PWW
PM REVIEW:

JDS

QA/QC REVIEW:

DATE: **12/10/2021**



DATE:

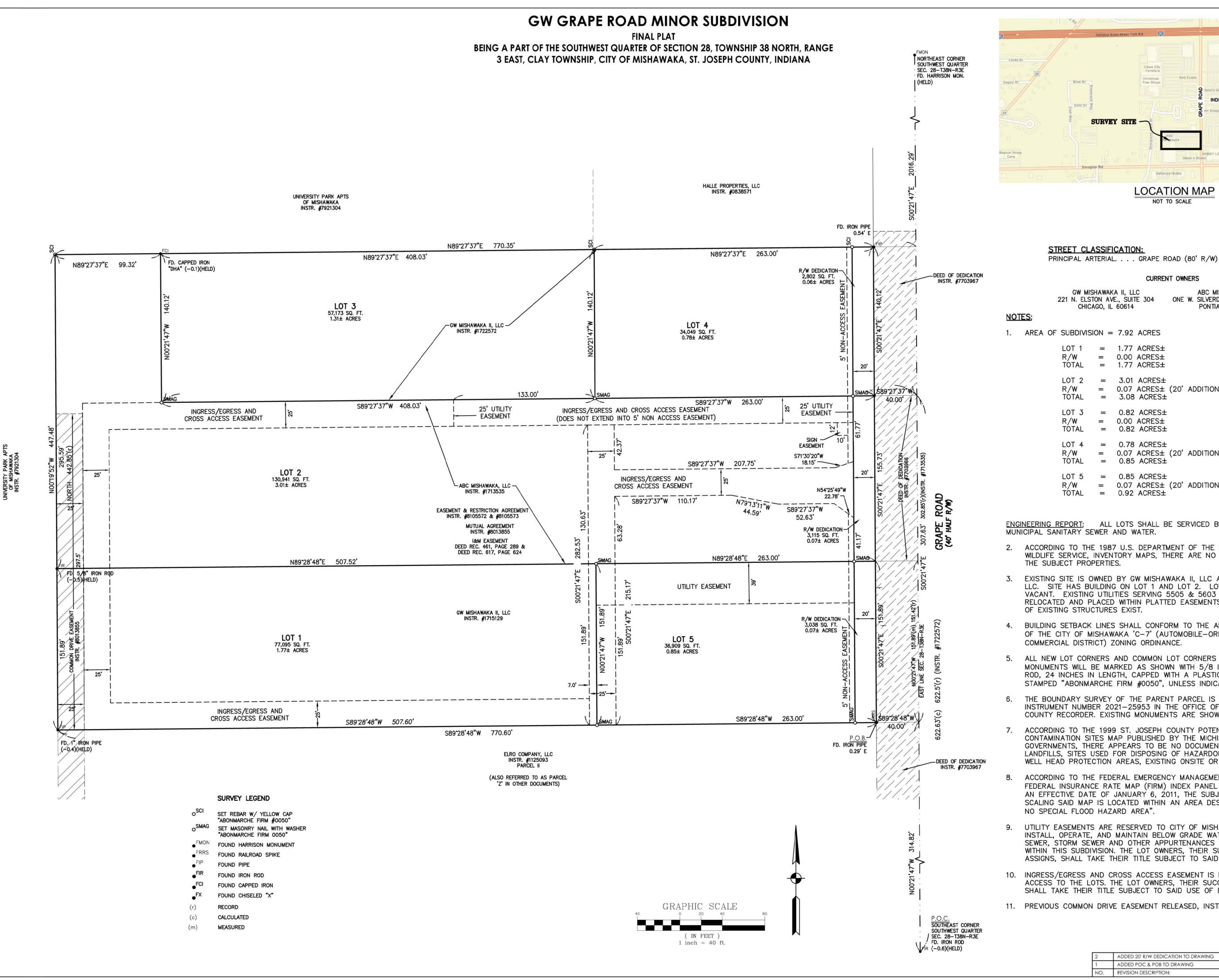
02/21/2022

SCALE: HORZ:

VERT:

21-1913 SHEET NO.

1 of 14





LOCATION MAP NOT TO SCALE

CURRENT OWNERS

ABC MISHAWAKA, LLC 221 N. ELSTON AVE., SUITE 304 ONE W. SILVERDOME INDUSTRIAL PARK PONTIAC, MI 48343

= 0.00 ACRES± = 1.77 ACRES± = 3.01 ACRES± = 0.07 ACRES± (20' ADDITIONAL R/W - GRAPE ROAD) = 3.08 ACRES± = 0.82 ACRES± = 0.00 ACRES± = 0.82 ACRES± = 0.78 ACRES± = 0.07 ACRES± (20' ADDITIONAL R/W - GRAPE ROAD) = 0.85 ACRES±

= 0.85 ACRES± = 0.07 ACRES± (20' ADDITIONAL R/W - GRAPE ROAD)

ENGINEERING REPORT: ALL LOTS SHALL BE SERVICED BY CITY OF MISHAWAKA MUNICIPAL SANITARY SEWER AND WATER.

- 2. ACCORDING TO THE 1987 U.S. DEPARTMENT OF THE INTERIOR. FISH AND WILDLIFE SERVICE, INVENTORY MAPS, THERE ARE NO WETLANDS LOCATED ON
- 3. EXISTING SITE IS OWNED BY GW MISHAWAKA II, LLC AND ABC MISHAWAKA, LLC. SITE HAS BUILDING ON LOT 1 AND LOT 2. LOTS 3, 4, AND 5 ARE VACANT. EXISTING UTILITIES SERVING 5505 & 5603 GRAPE ROAD SHALL BE RELOCATED AND PLACED WITHIN PLATTED EASEMENTS. NO ENCROACHMENTS
- 4. BUILDING SETBACK LINES SHALL CONFORM TO THE APPLICABLE PROVISIONS OF THE CITY OF MISHAWAKA 'C-7' (AUTOMOBILE-ORIENTED RESTAURANT COMMERCIAL DISTRICT) ZONING ORDINANCE.
- 5. ALL NEW LOT CORNERS AND COMMON LOT CORNERS WITHOUT FOUND MONUMENTS WILL BE MARKED AS SHOWN WITH 5/8 INCH DIAMETER REBAR ROD, 24 INCHES IN LENGTH, CAPPED WITH A PLASTIC, YELLOW MARKER STAMPED "ABONMARCHE FIRM #0050", UNLESS INDICATED OTHERWISE.
- 6. THE BOUNDARY SURVEY OF THE PARENT PARCEL IS RECORDED UNDER INSTRUMENT NUMBER 2021-25953 IN THE OFFICE OF THE ST. JOSEPH COUNTY RECORDER. EXISTING MONUMENTS ARE SHOWN ON SAID SURVEY.
- 7. ACCORDING TO THE 1999 ST. JOSEPH COUNTY POTENTIAL GROUNDWATER CONTAMINATION SITES MAP PUBLISHED BY THE MICHIANA AREA COUNCIL OF GOVERNMENTS, THERE APPEARS TO BE NO DOCUMENTED DUMPSITES, LANDFILLS, SITES USED FOR DISPOSING OF HAZARDOUS SUBSTANCES, OR WELL HEAD PROTECTION AREAS, EXISTING ONSITE OR ADJACENT TO THE SITE.
- ACCORDING TO THE FEDERAL EMERGENCY MANAGEMENT AGENCY (FEMA) FEDERAL INSURANCE RATE MAP (FIRM) INDEX PANEL NO. 18141C0204D WITH AN EFFECTIVE DATE OF JANUARY 6, 2011, THE SUBJECT PROPERTY BY SCALING SAID MAP IS LOCATED WITHIN AN AREA DESIGNATED AS "ZONE X, NO SPECIAL FLOOD HAZARD AREA".
- UTILITY EASEMENTS ARE RESERVED TO CITY OF MISHAWAKA UTILITIES TO INSTALL, OPERATE, AND MAINTAIN BELOW GRADE WATERLINE, SANITARY SEWER, STORM SEWER AND OTHER APPURTENANCES SERVING THE LOTS WITHIN THIS SUBDIVISION. THE LOT OWNERS, THEIR SUCCESSORS AND ASSIGNS, SHALL TAKE THEIR TITLE SUBJECT TO SAID USE OF EASEMENT.
- 10. INGRESS/EGRESS AND CROSS ACCESS EASEMENT IS RESERVED FOR INTERIOR ACCESS TO THE LOTS. THE LOT OWNERS, THEIR SUCCESSORS AND ASSIGNS, SHALL TAKE THEIR TITLE SUBJECT TO SAID USE OF EASEMENT.
- 11. PREVIOUS COMMON DRIVE EASEMENT RELEASED, INSTR. #___

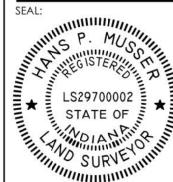
ADDED 20' R/W DEDICATION TO DRAWING HPM 12/03/2021 TRM 11/11/2021 ADDED POC & POB TO DRAWING REVISION DESCRIPTION:

⋖ N O $\mathbf{\Omega}$ 1

TRM/HPM

FIELDBOOK: HPM 1, PG. 27 PM REVIEW:

QA/QC REVIEW: 11/04/21



SIGNATURE:

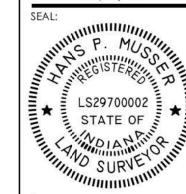
HARD COPY IS INTENDED TO BE 24" X 36" WHEN PLOTTED. SCALE(S) INDICATED AND GRAPHIC QUALITY MAY NOT

BE ACCURATE FOR ANY OTHER SIZES SCALE: HORZ: 1" = 40' VERT:

ACI JOB # 20-2084

HPM 1, PG. 27 PM REVIEW: QA/QC REVIEW:

11/04/21



HARD COPY IS INTENDED TO BE 24" X 36" WHEN PLOTTED.

SCALE(S) INDICATED AND GRAPHIC QUALITY MAY NOT BE ACCURATE FOR ANY OTHER SIZES

HORZ: 1" = 40'

20-2084

LEGAL DESCRIPTION:

A PART OF THE SOUTHWEST QUARTER OF SECTION 28, TOWNSHIP 38 NORTH, RANGE 3 EAST, CLAY TOWNSHIP, CITY OF MISHAWAKA, ST. JOSEPH COUNTY, INDIANA, AND BEING ALL OF THAT TRACT OF LAND CONVEYED TO GW MISHAWAKA II, LLC AS DESCRIBED IN INSTRUMENT NUMBER 1715129 AND INSTRUMENT NUMBER 1722572, ST. JOSEPH COUNTY RECORDER, AND BEING ALL OF THAT TRACT OF LAND CONVEYED TO ABC MISHAWAKA, LLC AS DESCRIBED IN INSTRUMENT NUMBER 1713535, ST. JOSEPH COUNTY RECORDER, AND BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS:

COMMENCING AT AN IRON ROD MARKING THE SOUTHEAST CORNER OF THE SOUTHWEST QUARTER OF SAID SECTION; THENCE NORTH OO DEGREES 21 MINUTES 47 SECONDS WEST, ALONG THE EAST LINE OF SAID SOUTHWEST QUARTER, 314.82 FEET: THENCE SOUTH 89 DEGREES 28 MINUTES 48 SECONDS WEST 40.00 FEET TO A RAILROAD SPIKE MARKING THE SOUTHEAST CORNER OF SAID GW MISHAWAKA II, LLC LAND (INSTRUMENT NUMBER 1715129) AND BEING THE POINT OF BEGINNING: THENCE CONTINUING SOUTH 89 DEGREES 28 MINUTES 48 SECONDS WEST, ALONG THE SOUTH LINE OF SAID GW MISHAWAKA II, LLC LAND, 770.60 FEET TO AN IRON PIPE MARKING THE SOUTHWEST CORNER OF SAID GW MISHAWAKA II, LLC LAND; THENCE NORTH OO DEGREES 19 MINUTES 52 SECONDS WEST, ALONG THE WEST LINE OF SAID LAND AND THE WEST LINE OF SAID ABC MISHAWAKA, LLC LAND, AND SAID LINE EXTENDED, 447.48 FEET TO A 5/8" CAPPED REBAR (ABONMARCHE FIRM 0050) ON THE SOUTH LINE OF LAND CONVEYED TO UNIVERSITY PARK APTS OF MISHAWAKA, AS DESCRIBED IN INSTRUMENT NUMBER 7921304, ST. JOSEPH COUNTY RECORDER: THENCE NORTH 89 DEGREES 27 MINUTES 37 SECONDS EAST, ALONG SAID SOUTH LINE AND THE SOUTH LINE OF A TRACT OF LAND CONVEYED TO HALLE PROPERTIES, LLC, AS DESCRIBED IN INSTRUMENT NUMBER 0838571, ST. JOSEPH COUNTY RECORDER, 770.35 FEET TO THE NORTHEAST CORNER OF SAID GW MISHAWAKA II, LLC LAND (INSTRUMENT NUMBER 1722572); THENCE SOUTH 00 DEGREES 21 MINUTES 47 SECONDS EAST ALONG THE EAST LINES OF SAID GW MISHAWAKA II, LLC LANDS AND THE EAST LINE OF SAID ABC MISHAWAKA, LLC LAND 447.74 FEET TO THE POINT OF BEGINNING.

CONTAINING 7.92 ACRES, MORE OR LESS AND SUBJECT TO ALL COVENANTS, RIGHTS-OF-WAY, AND EASEMENTS OF RECORD.

DEED OF DEDICATION:

THE UNDERSIGNED, GW MISHAWAKA II, LLC AND ABC MISHAWAKA, LLC, ARE THE OWNERS OF THE REAL ESTATE SHOWN AND DESCRIBED HEREIN, DO HEREBY LAYOFF, PLAT AND SUBDIVIDE SAID REAL ESTATE IN ACCORDANCE WITH THE REQUIREMENTS OF THE SUBDIVISION ORDINANCE OF THE CITY OF MISHAWAKA, INDIANA, THIS SUBDIVISION SHALL BE KNOWN AND DESIGNATED AS "GW GRAPE ROAD MINOR SUBDIVISION". ALL STREETS, RIGHT-OF-WAYS, ALLEYS, FUTURE ROADWAY EASEMENTS AND PUBLIC OPEN SPACES SHOWN AND NOT HERETOFORE DEDICATED NOW ARE HEREBY DEDICATED TO THE PUBLIC FOR THE USES DESIGNATED HEREIN. THE AREA OF GROUND DESIGNATED ON THIS PLAT AND MARKED AS "EASEMENTS", ARE RESERVED FOR THE USES AS DESIGNATED BY THE UTILITIES, AND INCLUDE, BUT ARE NOT LIMITED TO. THE INSTALLATION OF WATER AND SEWER MAINS, POLES, DUCTS, LINES AND WIRES, DRAINAGE FACILITIES, AND ACCESS FOR PRESENT OR FUTURE DEVELOPMENT, SUBJECT AT ALL TIMES TO THE PROPER AUTHORITIES AND TO THE EASEMENT HEREIN RESERVED. NO PERMANENT OR OTHER STRUCTURES ARE TO BE ERECTED OR MAINTAINED UPON SAID STRIPS OF LAND, BUT OWNERS OF LOTS IN THIS SUBDIVISION SHALL TAKE THEIR TITLES SUBJECT TO THE RIGHTS OF THE PUBLIC UTILITIES, AND TO THE RIGHTS OF THE OWNERS OF OTHER LOTS IN THIS SUBDIVISION.

OWNER'S CERTIFICATION:

THIS IS TO CERTIFY THAT THE UNDERSIGNED, ABC MISHAWAKA, LLC. IS THE OWNER OF THE LAND DESCRIBED HEREIN. AND HAS CAUSED THE SAME TO BE SURVEYED AND SUBDIVIDED AS INDICATED THEREON, FOR THE USES AND PURPOSES THEREIN SET FORTH, AND DOES HEREBY ACKNOWLEDGE AND ADOPT THE PLAT UNDER THE STYLE AND TITLE THEREON INDICATED.

ABC MISHAWAKA, LLC BY: ABC MISHAWAKA, LLC 1 W. SILVERDOME INDUSTRIAL PARK PONTIAC, MI 48343

, REPRESENTATIVE FOR: ABC MISHAWAKA, LLC

DATED THIS ______ DAY OF ______, 2021.

NOTARY PUBLIC CERTIFICATE:

STATE OF INDIANA

) SS: COUNTY OF)
BEFORE ME, THE UNDERSIGNED NOTARY PUBLIC, IN AND FOR SAID COUNTY AND STATE, PERSONALLY APPEARED MITCH GOLTZ AND ACKNOWLEDGED THE EXECUTION OF THE FOREGOING INSTRUMENT AS A VOLUNTARY ACT AND DEED FOR THE PURPOSES THEREIN EXPRESSED.
WITNESS MY HAND AND NOTARIAL SEAL THIS DAY OF, 2021.
MY COMMISSION EXPIRES:
(SIGNATURE)
(PRINT)

PROPERTY OWNER:

NOTARY PUBLIC IS A RESIDENT OF ______ COUNTY, INDIANA.

GW MISHAWAKA II, LLC CHICAGO, IL 60614

ABC MISHAWAKA, LLC 221 N. ELSTON AVE., SUITE 304 1 W SILVERDOME INDUSTRIAL PARK PONTIAC, MI 48343

SURVEYED BY:

ABONMARCHE CONSULTANTS, INC. 315 W. JEFFERSON BLVD SOUTH BEND, IN 46601

OWNER'S CERTIFICATION:

THIS IS TO CERTIFY THAT THE UNDERSIGNED, GW MISHAWAKA II, LLC, IS THE OWNER OF THE LAND DESCRIBED HEREIN, AND HAS CAUSED THE SAME TO BE SURVEYED AND SUBDIVIDED AS INDICATED THEREON, FOR THE USES AND PURPOSES THEREIN SET FORTH, AND DOES HEREBY ACKNOWLEDGE AND ADOPT THE PLAT UNDER THE STYLE AND TITLE THEREON INDICATED.

GW MISHAWAKA II, LLC

BY: GW MISHAWAKA II, LLC 221 N. ELSTON AVENUE, SUITE 304 CHICAGO, IL 60614

MITCH GOLTZ, REPRESENTATIVE FOR: GW MISHAWAKA II, LLC

DATED THIS ______, 2021.

NOTARY PUBLIC CERTIFICATE:

STATE OF INDIANA

) SS: COUNTY OF)		
BEFORE ME, THE UNDERSIGNED NOTARY PUBLIC, IN AND PERSONALLY APPEARED MITCH GOLTZ AND ACKNOWLEDGINSTRUMENT AS A VOLUNTARY ACT AND DEED FOR THE	GED THE EXECUTION OF THE	FOREGOING
WITNESS MY HAND AND NOTARIAL SEAL THIS DA	Y OF,	2021.
MY COMMISSION EXPIRES:	<u> </u>	
(SIGNATURE)	_	
(DDINT)	_	
(PRINT)		

SURVEYOR CERTIFICATE:

STATE of INDIANA

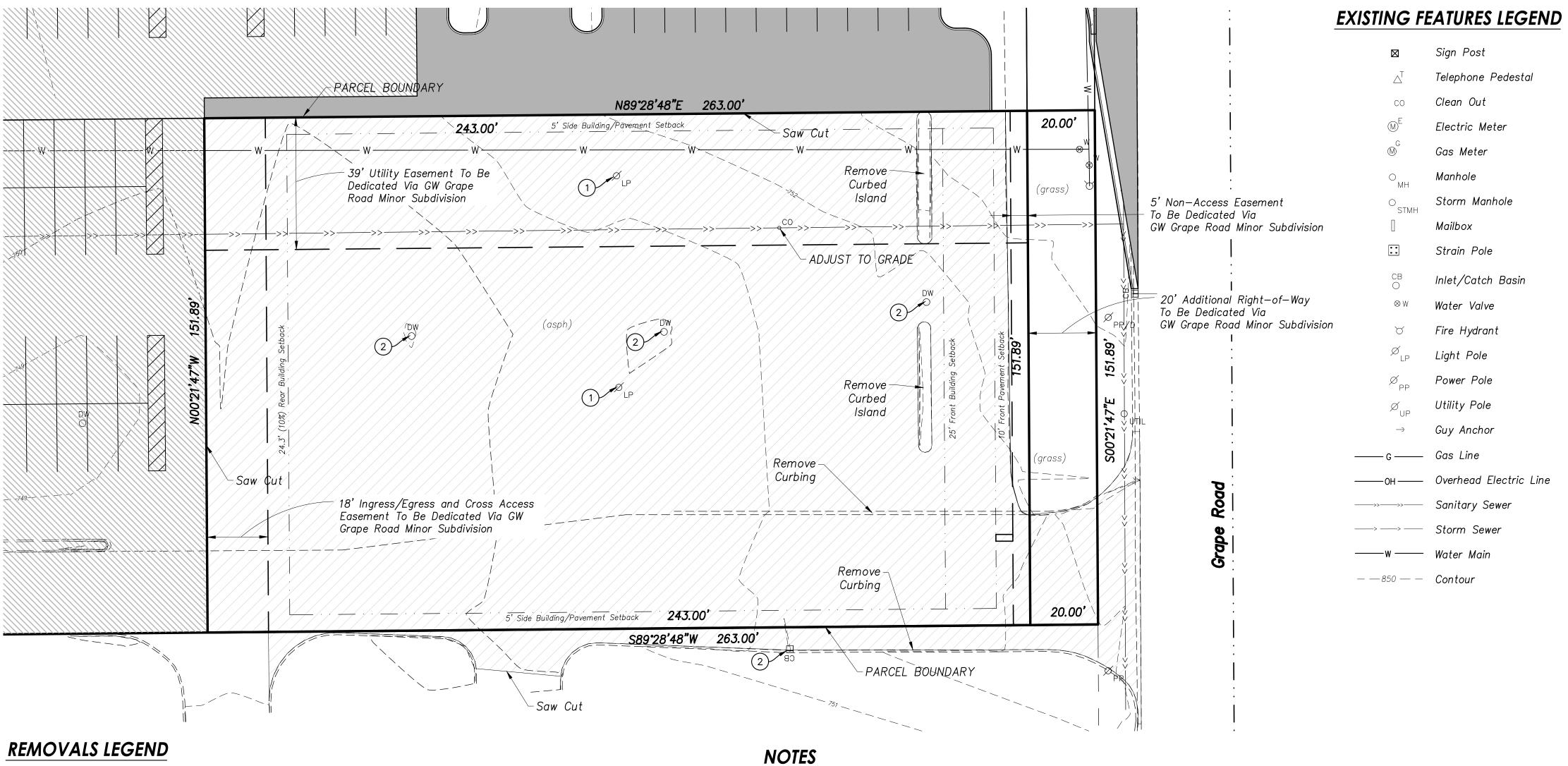
NOTARY PUBLIC IS A RESIDENT OF ______ COUNTY, INDIANA.

I, HANS P. MUSSER, HEREBY CERTIFY THAT I AM A REGISTERED LAND SURVEYOR, LICENSED IN COMPLIANCE WITH THE LAWS OF THE STATE OF INDIANA, THAT THIS PLAT IS ACCORDANCE WITH THE PROVISIONS OF THE SUBDIVISION ORDINANCE OF CITY OF MISHAWAKA, INDIANA.

THIS INSTRUMENT WAS PREPARED BY HANS P. MUSSER, P.L.S. 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.

4/21/2021 DATE HANS P. MUSSER, P.S. PROFESSIONAL LAND SURVEYOR #LS29700002

> ADDED 20' R/W DEDICATION TO DRAWING ADDED POC & POB TO DRAWING TRM 11/11/2021 NO. REVISION DESCRIPTION:



- Remove Existing Asphalt Pavement
- Remove Light Pole
- Remove Drainage Structure

- Contractor shall request existing utility location from Indiana 811 prior to commencing construction.
- 2. Contractor shall notify Department of Public Works prior to commencing construction
- 3. Contractor shall remove topsoil and stockpile the material onsite at a location approved by
- 4. Removed items shall be disposed off—site in accordance with all applicable local, state and federal codes.

DESIGNED BY: PWW

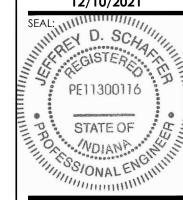
ARCHE

ABONM,

Taco Bell Mishawaka, Indiana

PM REVIEW: JDS QA/QC REVIEW:

12/10/2021



02/21/2022

HORZ: 1" = 20'

21-1913

SAL 02/15/2022 PWW 01/27/2022

LOT COVERAGE NOTES

Lot Area (Less Right-of-Way) = 33,909 SF (0.78 Acres)

Building Footprint = 2,234 SF (6.6% Coverage) Sidewalks and Pavement = 24,240 SF (71.5% Coverage) Lawn and Landscaping = 7435 SF (22.3% Coverage)

PARKING NOTES

Parking Required = 2,234 SF x 15 spaces per 1000 SF = 32 Spaces Parking Provided = 32 Spaces

SITE PLAN CONSTRUCTION NOTES

- 1. Contractor shall request existing utility location from Indiana 811 prior to commencing construction.
- 2. Damage to public and private property shall be repaired to equal or better condition at no additional cost to the Owner.
- 3. No streets shall be closed or restricted without prior approval from the local municipality. See City standards.
- 4. Contractor shall protect the work and the safety of the public and shall provide, erect and maintain barricades, signals, signs and other traffic control devices in accordance with the Indiana Manual on Uniform Traffic Control Devices.
- 5. Contractor shall follow "2020 Indiana Department of Transportation Standard Specifications" for pavement materials and installation
- 6. Contractor shall construct sidewalks, ramps, parking spaces and ADA accessible areas in accordance with the current ADA standards.
- 7. Traffic sign designations shall comply with the U.S. Dept. of Transportation Federal Highway Administration "Manual on Uniform Traffic Control Devices" (MUTCD).
- 8. Curb radii noted are dimensioned along the face of curb.
- 9. Contractor shall bring Drawing discrepancies and conflicts to the attention of the Engineer as soon as they are noticed, for clarifications and revisions as necessary.
- 10. Contractor shall prepare Record Drawings with field locations and elevations upon completion of the work for submittal to the Engineer.

PROPOSED FEATURES LEGEND

Standard HMA Pavement: 1-1/2" HMA Surface (165 #/SY) 2-1/2" HMA Intermediate (275 #/SY) 8" Compacted #53 Aggregate Base

- © 6" Concrete Pavement
- (F) 4" Concrete Sidewalk
- (L) Landscape Area
- (13) Concrete Curb
- (P1) 4" Solid Paint Line White for Standard Parking Space Blue for ADA Access Parking Space White for Cross Walk
- (P2) Stop Bar: 24" Solid White Paint Line
- (R) Curb Ramp
- (S1) MUTCD R−1 "STOP" Sign & Post
- (S2) R7-8: "RESERVED PARKING" (ADA Access) & R7-8P: "VAN ACCESSIBLE"
- T) Curb Turnout
- Drainage Structure
- °co Cleanout
- > Fire Hydrant Assembly
- Light Pole & Foundation
- → Traffic Direction Arrow Graphic Pavement Marking;
- $\langle \#A \rangle$ Number of Auto Spaces within parking bay

GENERAL NOTES

- 1. Owner/Developer: Delight Taco Bell Indiana, LLC
- 2. Legal Description: Proposed Lot 5 of GW Grape Road Minor Subdivision.
- 3. Current Zoning: City of Mishawaka C−7.
- 4. Existing Land Use: Vacant / Proposed Land Use: Fast Food Restaurant.
- 5. The site shall conform to the area, height, and development regulations of the C-7 Automobile Oriented Restaurant Commercial District unless the proper variances are granted by the Board of Zoning Appeals.
- 6. The building will be serviced by City of Mishawaka municipal water and sewer.
- 7. Landscaping, lighting & signage will be in accordance with the zoning ordinance unless the proper variances are obtained.
- 8. Storm water will be detained on site per this plan set.
- 9. See Architectural Drawings for building elevations, layout, foundations, etc.
- 10. The approach and deceleration lane have been designed in accordance with the Mishawaka Engineering Standards for a commercial drive approach Type 1A with a posted speed limit of 40 mph on Grape Road.
- 11. Proposed Building will be one-story in height.
- 12. Dimensions as shown are to back of curb or face of curb as appropriate.
- 13. Radii are shown to face of curb.

C 4 ONW

AB

EY D. SCA PE11300116 STATE OF . NDIANA. SIONALE

02/21/2022

SCALE: HORZ: 1" = 20' VERT:

21-1913

5 of 14

2 PER CITY OF MISHAWAKA REVIEW COMMENTS SAL 02/14/2022 1 PER CITY OF MISHAWAKA REVIEW COMMENTS PWW 01/27/2022



DRAINAGE CALCULATIONS

Stormwater Narrative

The existing site area is nearly all impervious surface with stormwater management provided by two drywells. The proposed site includes an underground detention system designed to manage the 100-year, 24-hour rainfall event. Stormwater is released from the system via two potential paths: overland flow to the remainder of the overall development from the southwest inlet and infiltration into the

Release Rate — Overland Flow

The release rate via overland flow was designed to be the run—off from the site, if it were undeveloped, during the 10—year, 1—hour rainfall event (1.20 inches per hour). Using the rational method, the release rate is calculated to be 0.305 cubic feet per second.

Release Rate — Infiltration

The infiltration rate as measured by testing completed in June 2021 is 1.90 inches per hour. Using this infiltration rate and the surface area under the chambers (2140 sf), the design release rate is calculated to be 339 cubic feet per hour (0.094 cubic feet per second).

Detention Design

The detention system has been designed to only consider the release rate from infiltration, 0.094 cubic feet per second. Recovery Period

The total capacity of the underground detention system is 8012 cubic feet. Using the release rate of 339 cubic feet per second, the detention volume will be recovered in 23.6 hours.

Stormwater Design	Criteri	а	
Developed Coefficient	C =	0.63	
Area	A =	0.851	acres
Infiltration Rate	lr =	1.90	in/hr
Infiltration Area	Ai =	2140	sf
Release Rate from Infiltration	Qr =	0.094	cfs

Coverage Calculations

Cover	Area (sf)	С
Roof	2234	0.90
Pavement	20609	0.90
Lawn	14208	0.20
Total	37051	0.63

Required Detention Calculations					
Duration	Intensity	Inflow	Release	Storage	Required
(hrs)	(in/hr)	Rate (cfs)	Rate (cfs)	Rate (cfs)	Storage (cf)
0.25	6.14	3.298	0.094	3.204	2880
0.50	4.43	2.380	0.094	2.286	4110
1.00	2.96	1.590	0.094	1.496	5390
2.00	1.87	1.005	0.094	0.910	6560
3.00	1.35	0.725	0.094	0.631	6820
6.00	0.82	0.439	0.094	0.345	7460
12.00	0.47	0.250	0.094	0.156	6730
24.00	0.26	0.139	0.094	0.045	3890

Total Storage Required (100 Year Storm)	7460 cf
Required Strorage plus 6% Siltation	7908 cf
Total Storage Provided	8012 cf

6" Wet Tap, Private Hydrants to be Maintained by Owner Existing Water Existing Sanitary Proposed Structure No. 1 30" Inlet $_{>}$ Rim=749.63 12" HDPE IE SE=745.63 Sump: 743.63 Proposed Water Service: Proposed Structure No. 1A .120 Ift 1" Type K Copper 30" ADS Structure / Rim = 750.5312" HDPE IE NW=745.44 Proposed Structure No. 2A 48 Ift 6" SDR 35 PVC 30" ADS Structure Sanitary Pipe @ 1.5% Rim = 750.23With Wyes and Cleanouts 12" Perf. IE SW=745.73 As Shown / Required ├ See Detail Below Proposed Structure No. 2 48" Manhole Rim=749.35 12" Perf. IE NE=745.88 CO >> -12" Perf. IE E=745.88 Sump: 743.88 84 Ift 12" Perforated \ Proposed Sanitary Service: \ Pipe @ 0.5% 2500 Gallon Grease « Stormwater 120 Ift 6" SDR35 @ 1.0% → Interceptor Overflow Route See Sizing Below (Interceptor to Wye) See Detail Below (typical) -Proposed Structure No. 3 Rim = 750.3012" HDPE IE W=746.30 Sump: 744.30

Grease Trap Sizing

Grease Trap Sizing conforms to the requirements set forth by the City of Mishawaka, adjusted for calculation of "Meals Served During Peak Hour".

• Building will have a 35 seat seating capacity, and serves fast food (Peak Factor = 1.33) • Building will have a commercial kitchen with dishwashing machines (Waste Flow Rate Factor = 6)

Building will have commercial kitchen waste (Retention Time = 2.4) Building will have a 24-hour operation (Storage Factor = 3)

Required = $35 \times 1.33 \times 6 \times 2.4 \times 3 = 2011$ gallons Proposed = 2500 gallons

EXISTING FEATURES LEGEND

\boxtimes	Sign Post	—— G ——	Gas Line
\triangle^{T}	Telephone Pedestal	——ОН ——	Overhead Electric Lin
CO	Clean Out		Sanitary Sewer
\bigcirc E	Electric Meter	>	Storm Sewer
$\stackrel{G}{\mathbb{M}}$	Gas Meter	——w ——	Water Main
OMH	Manhole	— — 850 — —	Contour
O STMH	Storm Manhole		
	Mailbox		
* *	Strain Pole		
СВ	Inlet/Catch Basin		
\otimes W	Water Valve		
A	Fire Hydrant		
\varnothing_{LP}	Light Pole		
Ø PP	Power Pole		
Ø _{UP}	Utility Pole		
\rightarrow	Guy Anchor		

NOTES:

- 1. Inlet Protection to be installed on Storm Structures 1-3 (see details)
- 2. Storm sewer pipe to be Class III RCP
- → Overland Flood Route

POST CONSTRUCTION MAINTENANCE PROCEDURES

- A. <u>Storm Manhole & Inlet Structures (Site Owner's Responsibility)</u>
- 1. Inspect storm manhole structures, dry wells and storm inlet structures and remove built—up vegetation, trash and debris — monthly (minimum) and after each storm event of 3—inches or greater.
- 2. Remove root intrusions and vegetation from structures and dry wells as
- 3. Repair broken castings and grates as needed.
- 4. Inspect pipes located within the structures for signs of clogging or damage, repair as needed — annually (minimum).

HMA Pavement Section Dense Graded Aggregate Subgrade Cover (Varies) Geotextile Between Subgrade And Stone Trench No. 8 Crushed Stone Trench -Perforated ADS N-12 Pipe Wrapped in Geotextile

Perforated Pipe Laid In Stone Trench

*Groundwater Depth, ft During Drilling During **Following** Drilling ±16.5 †NO B-4 NO NO ±16 NO P-1 ±16 NO NO P-2 ±17 NO NO *Depths referenced below existing ground surface.

SOIL INFILTRATION TEST RESULTS

Soil Description

Sand

Soil borings conducted on February 18, 2022

Approximate

Depth (feet)

Test Location

1-1

GME **GME TESTING**

Boring

B-1

B-2

B-3

† Not Observed (NO)

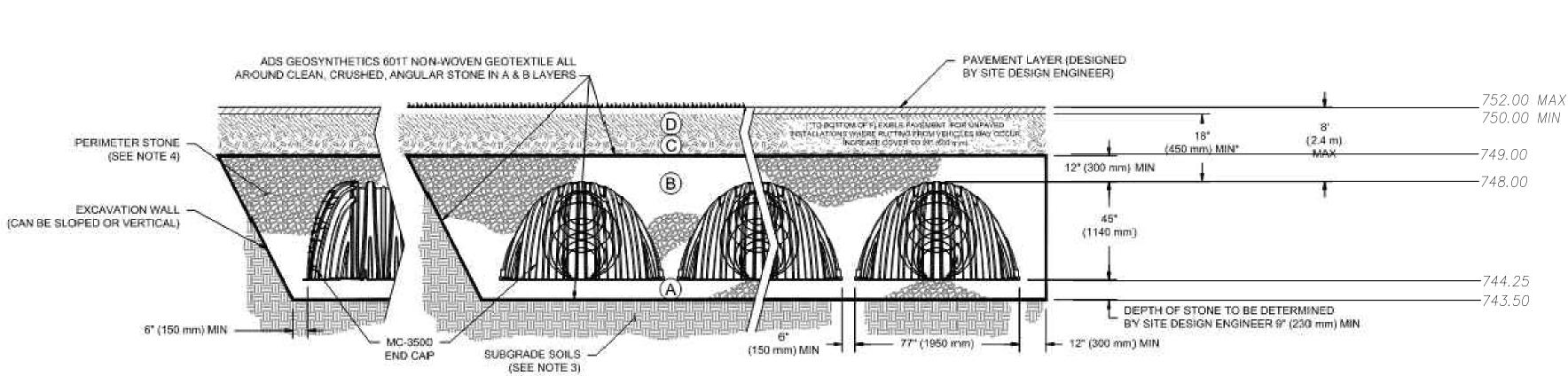
Infiltration Rate

in/hour

1.90

cm/sec

1.34 x 10⁻³



NOTE: For schematic purpose only. (See Construction Details for additional information)

2 PER CITY OF MISHAWAKA REVIEW COMMENTS SAL 02/18/2022 1 PER CITY OF MISHAWAKA REVIEW COMMENTS PWW 01/27/2022

PWW DESIGNED BY: **PWW** PM REVIEW: JDS QA/QC REVIEW: MJH 12/10/2021 EY D. SCL PE11300116 STATE OF

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Top of Curb/Wall Elev. Finished Pavement Elev.

Finished Pavement Elev.

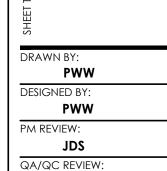
Concrete Pavement Elev.

ADA Ramp Detailed Grading View: (Scale 1":10')

W:722.96 Finished Sidewalk Elev.

EP:722.96* Existing Elev.

—722 — Contour



12/10/2021

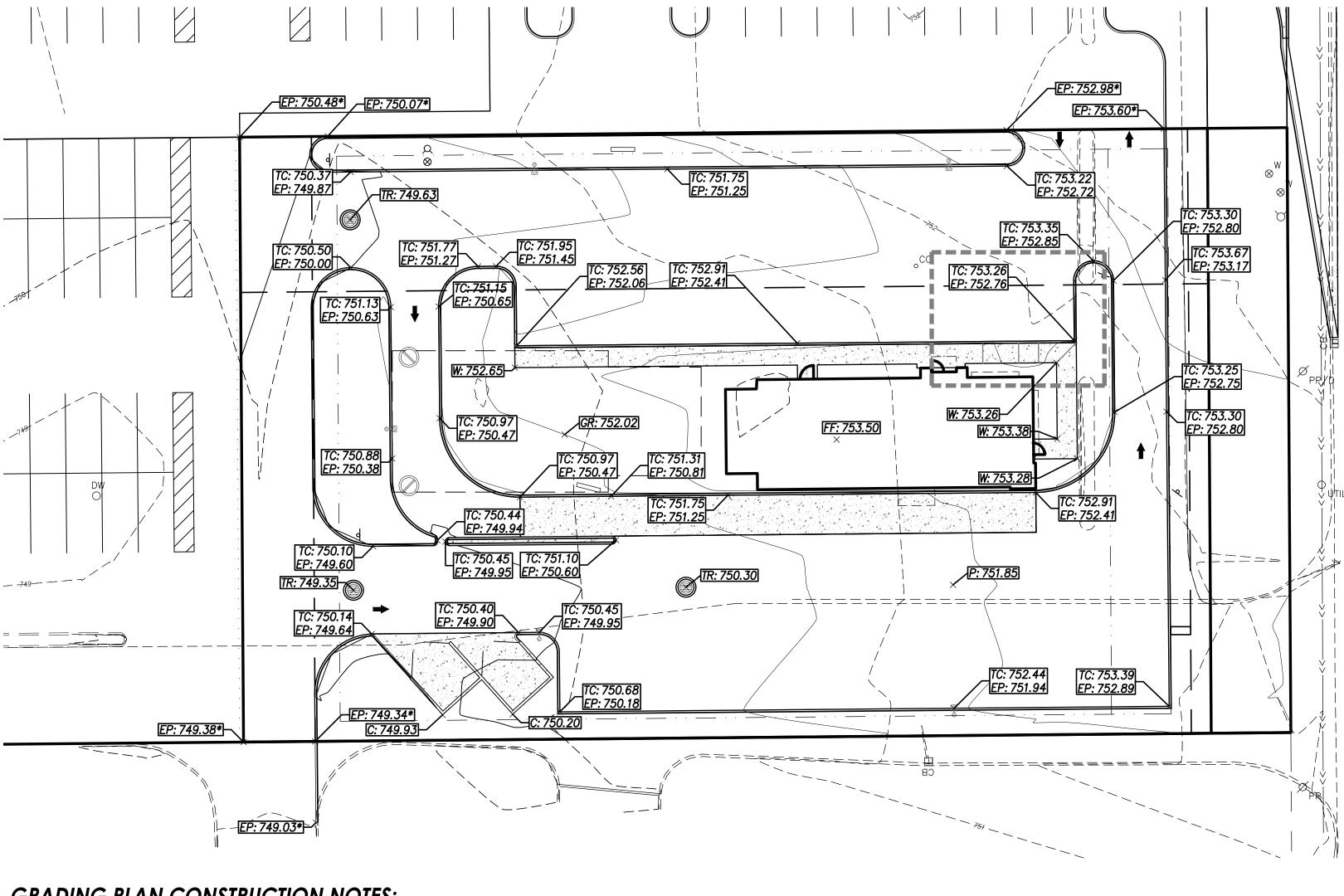
PE11300116 STATE OF

02/21/2022

SCALE: HORZ: 1" = 20'

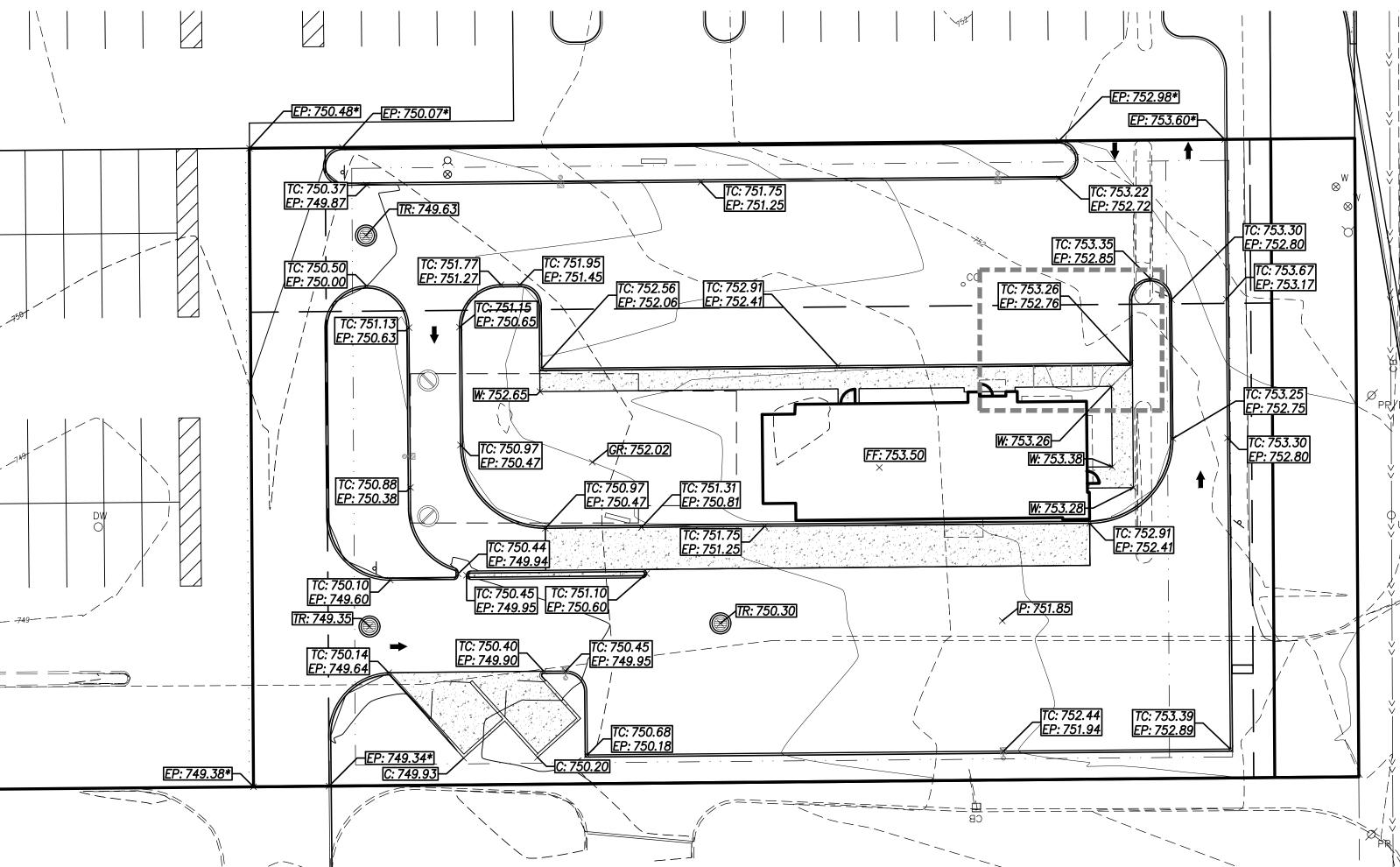
PWW 01/27/2022

2 PER CITY OF MISHAWAKA REVIEW COMMENTS 1 PER CITY OF MISHAWAKA REVIEW COMMENTS 21-1913



GRADING PLAN CONSTRUCTION NOTES:

- 1. Contractor shall remove topsoil and stockpile the material onsite at a location approved by the Owner. Place a minimum of 4 inches of topsoil on all disturbed areas outside the building and parking areas.
- 2. A qualified soil testing firm approved by the Owner shall perform compaction testing during construction.
- 3. Prior to commencing paving operations, Contractor shall proof roll exposed subgrade with a geotechnical engineer or qualified representative to witness the work. Excavate unsuitable soil and backfill and compact with suitable material capable of supporting the anticipated loads.
- 4. Place site grading backfill in maximum six inch lifts and compact to 100% Standard Proctor to the top of subgrade or in accordance with the geotechnical report.
- 5. Finished grades at building doorways shall match the building finished floor elevation, unless otherwise noted.
- 6. Contractor is responsible for meeting ADA guidelines at sidewalks and parking areas.
- 7. Paving Contractor is responsible for adjusting all castings located in the pavement to finished grade.
- 8. The proposed contours and spot elevations on this Drawing show grading intent only. Contractor is responsible for confirming that the provided grading plan maintains positive drainage to prevent ponded water or encroachment onto adjacent properties; and shall contact the Engineer if additional grades are needed, if the design does not provide positive drainage, or if any discrepancies/conflicts are found.



QA/QC REVIEW: MJH 12/10/2021

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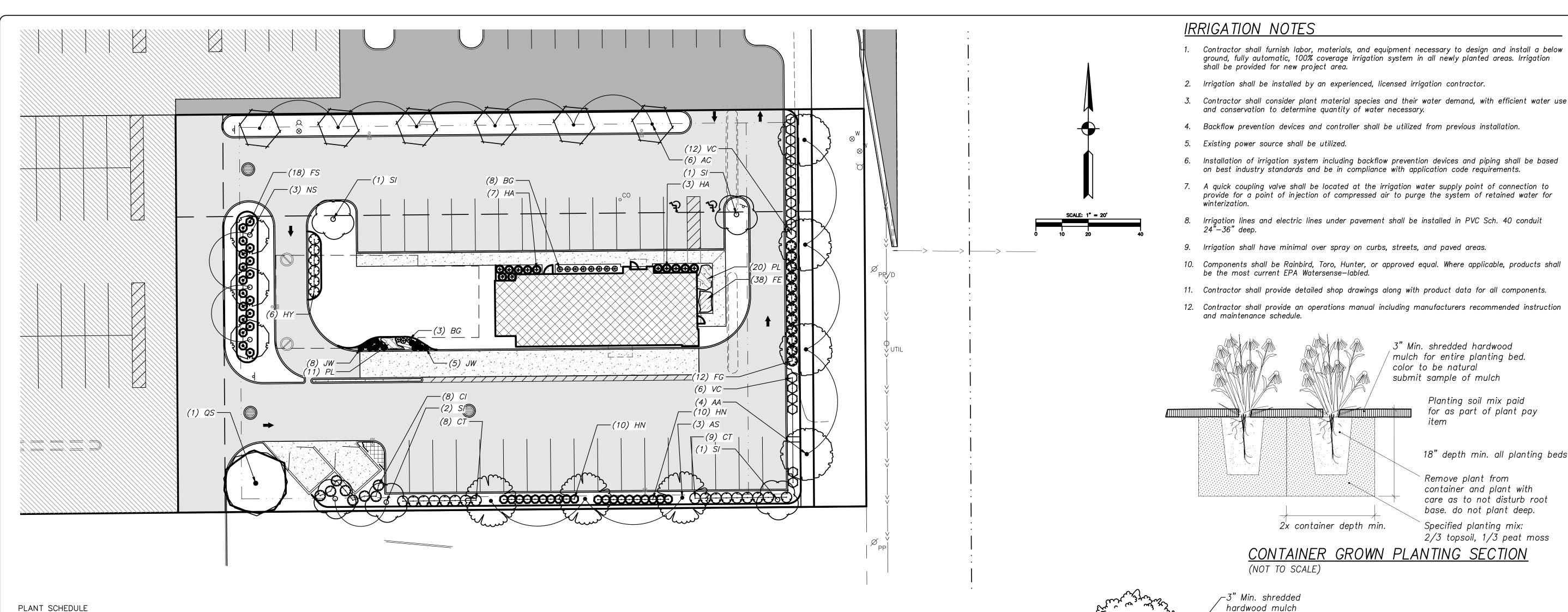
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SCALE: HORZ: 1" = 20' VERT:

21-1913



<u>SIZE</u> <u>CONTAII</u> 2.5" CAL B&B <u>QTY</u> <u>BOTANICAL NAME</u> COMMON NAME <u>REMARKS</u> Acer platanoides 'Columnare' Columnar Norway Maple Acer rubrum 'Autumn Spire' Autumn Spire Red Maple 2.5" CAL B&B 2.5" CAL B&B Acer x freemanii 'Armstrong' Armstrong Freeman Maple 2.5" CAL B&B Nyssa sylvatica 2.5" CAL B&B Shumard Oak Quercus shumardii Syringa reticulata 'Ivorv Silk' Ivory Silk Japanese Tree Lilac 2.5" CAL B&B <u>SPACING</u> <u>REMARKS</u> 24" o.c. <u>SHRUBS</u> COMMON NAME <u>BOTANICAL NAME</u> Buxus x 'Green Gem' Green Gem Boxwood 3 Gal. 5 Gal. Cornus pumila Dwarf Red Tipped Dogwood 36" Ht 48" o.c. Arctic Fire Yellow Dogwood Cornus sericea 'SMNCSBD' TM 5 Gal. 48" o.c. Forsythia x 'Gold Tides' Golden Tide Forsythia 5 Gal. 48" o.c. 5 Gal. 36" o.c. Forsythia x 'Sunrise' Sunrise Forsythia 24" Ht 5 Gal. Hydrangea arborescens 'Brian Nitz' Annabelle Smooth Hydrangea Hydrangea macrophylla 'Nikko Blue' 5 Gal. Nikko Blue Hydrangea Hydrangea macrophylla 'Red Sensation' Red Sensation Hydrangea 5 Gal. 48" o.c. Juniperus horizontalis 'Wiltonii' Blue Rug Juniper 3 Gal. 24" o.c. Compact Koreanspice Viburnum 36" Ht 7 Gal. Viburnum carlesii 'Compactum'

Elijah Blue Fescue

Little Spire Russian Sage

Peach Daylily

<u>SIZE</u> 6" Tall

12" Tall

18" Tall 3 Gal.

CONTAINER

3 Gal. 2 Gal.

<u>SPACING</u> <u>REMARKS</u>

18" o.c.

Festuca glauca 'Elijah Blue'

Perovskia atriplicifolia 'Little Spire'

Hemerocallis x 'Peach'

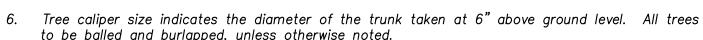
SHRUB AREAS QTY BOTANICAL NAME

LANDSCAPE NOTES

- 1. All landscape shall be in accordance with the City of Mishawaka Zoning Ordinance.
- 2. Work shall be performed by a single firm specializing in landscape work with a minimum of five years experience. Landscape contractor is responsible for coordination with other work for proper installation of plant materials and landscape work.
- 3. Contractor shall inquire all utility companies prior to construction for locations of underground utilities. Any damage done to any public and/or private properties during construction shall be repaired at the contractor's expense.
- 4. All existing trees not noted for removal shall be protected and maintained without injury and with sufficient area for the root system to sustain the tree. Protective care and physical restraint barriers at the drip line, such as temporary protective fencing shall be provided to prevent alteration, compaction or increased depth of the soil in the root system area prior to and during groundwork and construction. Heavy equipment traffic and the storage of construction equipment or materials shall not occur within the drip line of the trees.
- 5. All plant materials shall be nursery grown and shall meet the latest edition of ANSI Z60.1 "American Standard For Nursery Stock". All plant material shall be vigorous stock free of disease, insects, eggs, larvae, and defects such as knots, sun—scald, injuries, abrasions or disfigurement. Landscape designer may request a list of nurseries where plant material was acquired from.

- to be balled and burlapped, unless otherwise noted.
- plant material, prior to planting.
- than 7.0. Discuss with Engineer prior to making any other adjustments soil analysis indicates.
- immediately, roots should be heeled in and covered with mulch.
- 12. Landscape beds shall be defined by commercial grade $1/8" \times 4"$ steel edging, produced by an
- 13. Apply pre-emergent herbicide to all landscape beds prior to mulching. Landscape beds to receive 3" thick shredded hardwood mulch. All trees not within landscape beds are to receive a spaded natural "v" edged hardwood mulch ring 3' radius and 3"
- 14. Install plants so that the top of the root ball is even with the finished grade. For backfill areas, plant root ball up to 3" high to allow for settling. Ensure all plants have a level
- 15. Contractor shall provide a two year straightening guarantee in lieu of staking trees. One year guarantee for all plant materials from the date of installation. Warranty shall include replacement of dead or unhealthy vegetation to be planted in the next growing season, with a new one (1) warranty commencing on date of replacement for each plant replaced.
- be removed from tree in one year as part of maintenance.
- restored. Provide alternate price for sodding in lieu of hydroseeding. Right of way areas between the property line and the road shall be restored.

- 7. Contractor to notify engineer immediately of any foreign substance that may be damaging to
- Conduct soil test to verify fertility of topsoil. Amend soil if pH is less than 5.5 or greater
- source, free from stones or debris over 3/4" dia, and free from herbicides or other toxins.
- moss and fertilizer. Mix in with native soil at base of depth.
- established manufacturer or approved equal.
- 16. Prior to wrapping, the tree trunks shall be inspected by engineer. All tree wrap/twine etc. to
- 18. Irrigate all planting beds and lawn areas per owners direction.
- 19. Contractor to reseed all disturbed areas.



8. All soil preparation of planting areas to be done by experienced landscape contractor.

9. Keep the soil of all plants moist until they are planted. Check balled and burlapped plants to ensure they are receiving water through burlap material. If plants cannot be planted

- 10. Topsoil to be 6" min depth in all lawn areas. Topsoil to be clean friable loam from local
- 11. Planting mix to be 18" min depth in all planting beds and consist of 2/3 topsoil, 1/3 peat
- depth. Type of mulch to match existing.
- subsoil base and are set plumb.
- 17. All lawn areas to be hydroseeded. Any other areas disturbed during construction to be

Specified planting mix 2/3 topsoil, 1/3 peat moss & fertilizer. water and tamp to remove air pockets

Compacted backfill material, as specified, or existing

Finish grade sub-grade 2x ball size min.

Remove all wire, string and burlap from top 1/2 of

60[^] TYP.

3" Min. shredded hardwood mulch for entire planting bed.

> Planting soil mix paid for as part of plant pay

Remove plant from

container and plant with

Specified planting mix:

care as to not disturb root base. do not plant deep.

2/3 topsoil, 1/3 peat moss

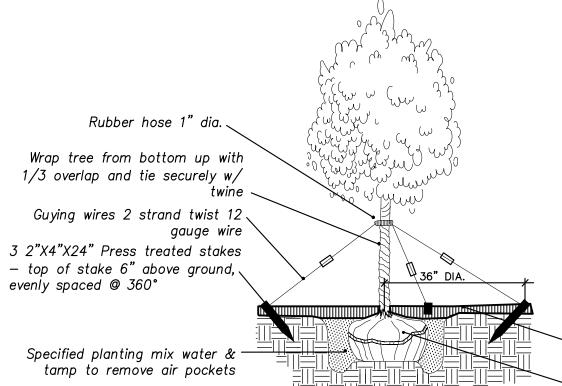
18" depth min. all planting beds

color to be natural

submit sample of mulch

SHRUB ON SLOPE PLANTING DETAIL (NOT TO SCALE)

TYPICAL STAGGER PLANTING DETAIL (NOT TO SCALE) NOTE: All shade and ornamental trees to be specimen quality, park grade trees will not be accepted.



GENERAL NOTES: • Contractor can elect to eliminate staking in areas proximal to pedestrian circulation, provided contractor agrees in writing to straighten any crooked trees until established.

all trees must be nursery grown and pruned to achieve a

must have a strong central leader. no crothching or

undesirable characteristics will be permitted.

street tree form with branching no lower than 5' - 6' trees

* Plant so that top of root ball is even with the finish grade on existing soil base. for backfill areas, plant ball up to 2 1/2" - 3" higher to allow for settlement

• Flag guying wires with surveyor tape for trees

3" Min. depth shredded hardwood mulch Remove all wire, string and burlap from top 1/2 of ball

SHADE/ORNAMENTAL TREE PLANTING SECTION

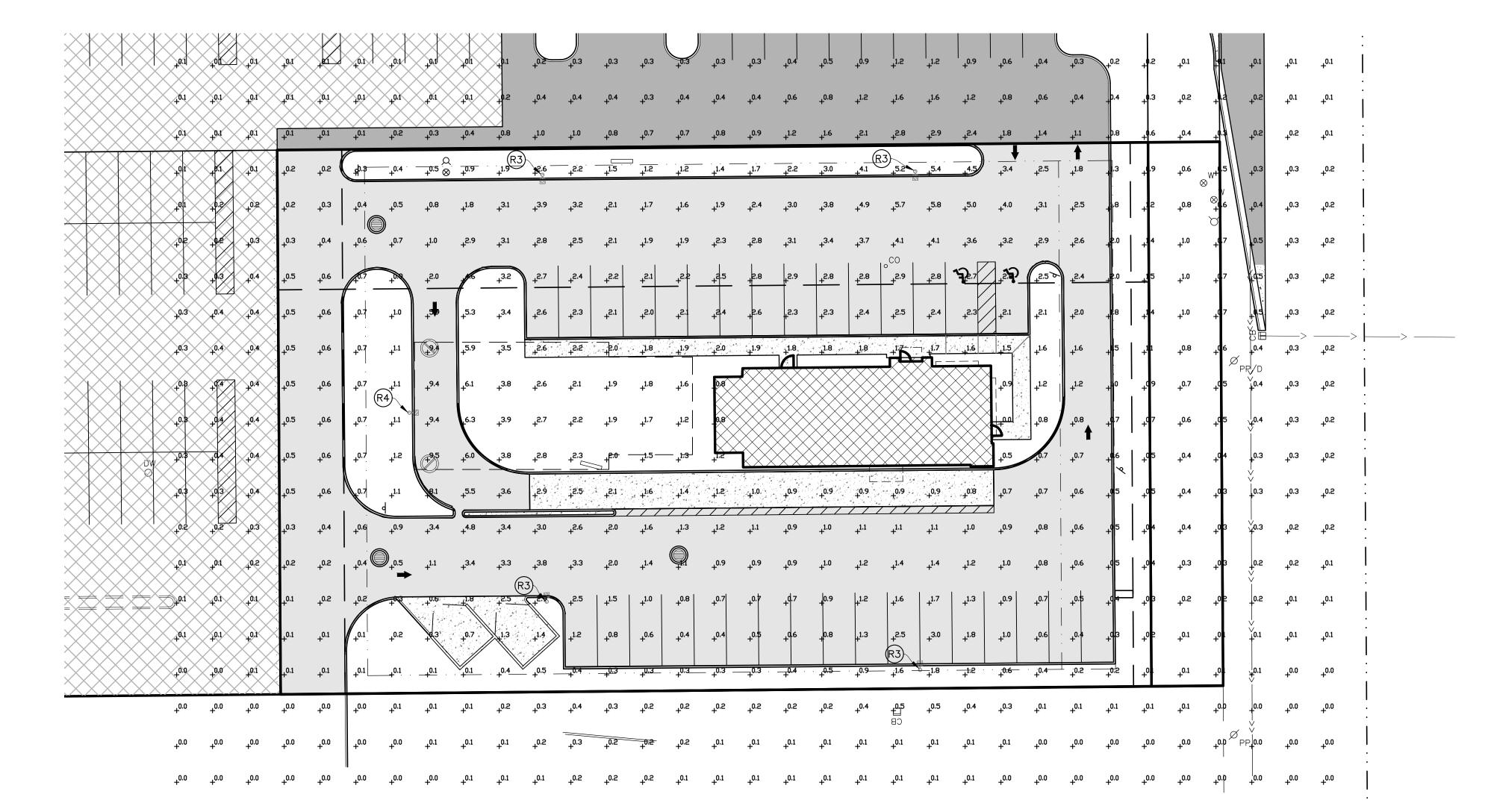
(NOT TO SCALE)

Compacted backfill material as

specified

2 PER CITY OF MISHAWAKA REVIEW COMMENTS 1 PER CITY OF MISHAWAKA REVIEW COMMENTS

SAL 02/15/2022 PWW 01/27/202



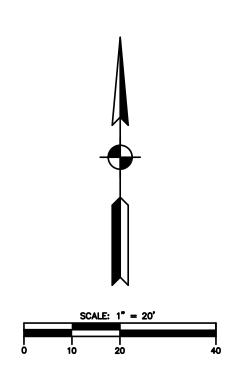
KEYNOTE LEGEND

Lithonia RSX2-P6-40K-R3 on 30' Pole

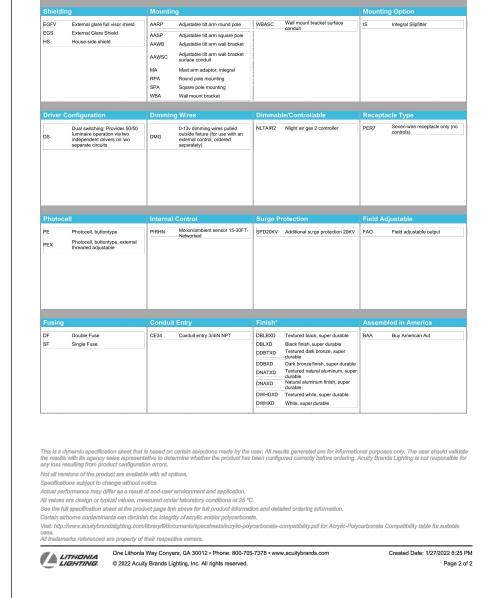
Lithonia RSX2-P6-40K-R4 on 30' Pole

GENERAL NOTES

- 1. Design and Construction shall adhere to South Bend Construction and Standard Specifications.
- 2. Contractor shall install Poles and Lighting according to the manufacturers recommendations.
- 3. All wall lighting in decorative in it's use and does not provide illumination (in foot—candles) at a distance of greater than 10 feet past the luminaries.







PWW DESIGNED BY: PWW PM REVIEW: JDS QA/QC REVIEW: MJH DATE: 12/10/2021 D. SCHALLING D. SC

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21-1913 9 of 14

2 PER CITY OF MISHAWAKA REVIEW COMMENTS 1 PER CITY OF MISHAWAKA REVIEW COMMENTS PWW 01/27/2022

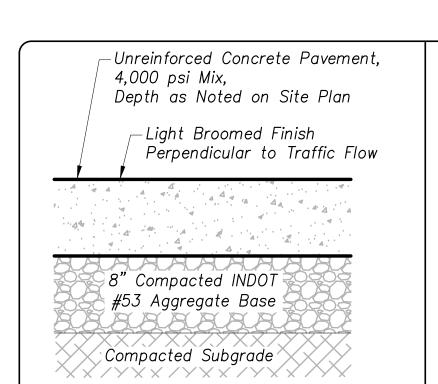
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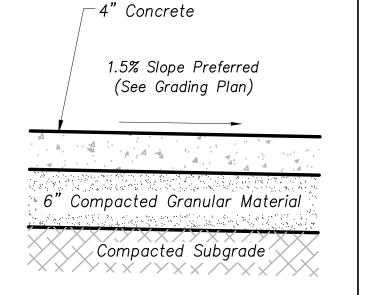


NOTES:

- 1. See geotechnical report for specifications & additional information.
- 2. See Thickened Edge Detail, this sheet.

CONCRETE PAVEMENT/PAD TYPICAL SECTION

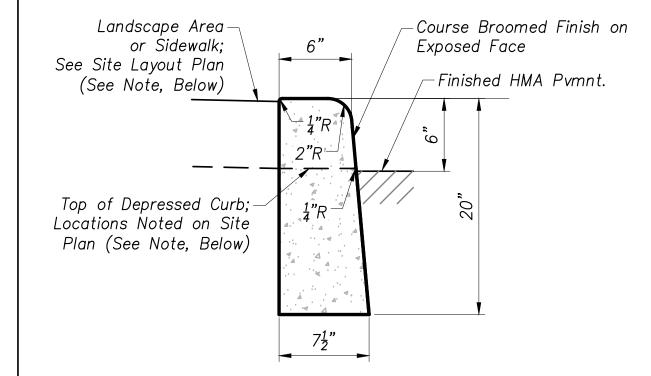
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Where sidewalk is located adjacent to the building, install I 1/2" preformed expansion joint between foundation & walk

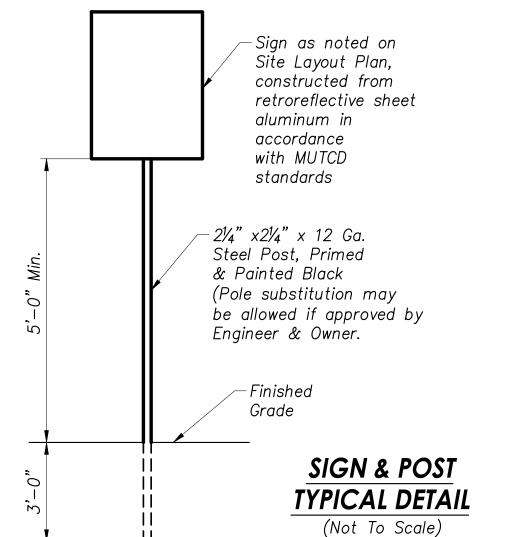
CONCRETE SIDEWALK TYPICAL SECTION

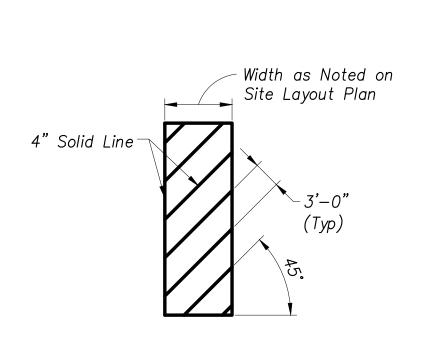
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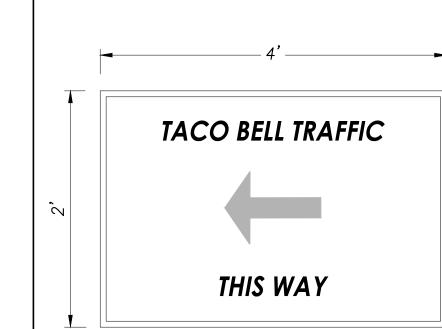
Where sidewalk is located behind curb, install 1/2" preformed expansion joint between curb & walk.

STANDARD CONCRETE CURB TYPICAL DETAIL (Not To Scale)

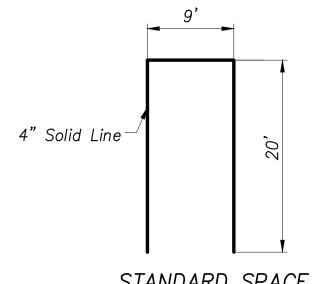




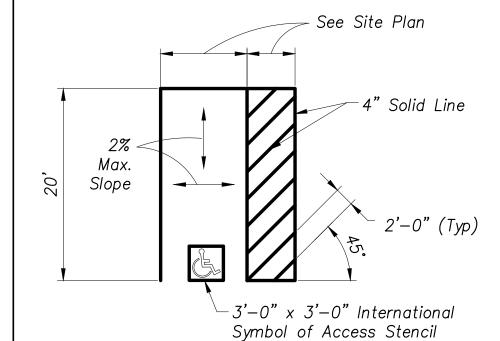




TACO BELL TRAFFIC SIGN (Not To Scale)



STANDARD SPACE



ADA ACCESSIBLE SPACE

PAVEMENT MARKINGS: PARKING SPACE TYPICAL DETAILS

(Not To Scale)

CONSTRUCTION NOTES

- a. Except where otherwise indicated on these plans or in the proposal and supplemental specifications contained therein, all materials and workmanship shall be in accordance with the 2020 Indiana Department of Transportation (INDOT) Standard Specifications for
- b. Contractor shall submit shop drawings and mix designs to Engineer for review and approval prior to ordering any material.
- c. Cure concrete in accordance with current INDOT and local specifications.
- d. Align curb, gutter and sidewalk joints.

1. <u>SIDEWALK</u>

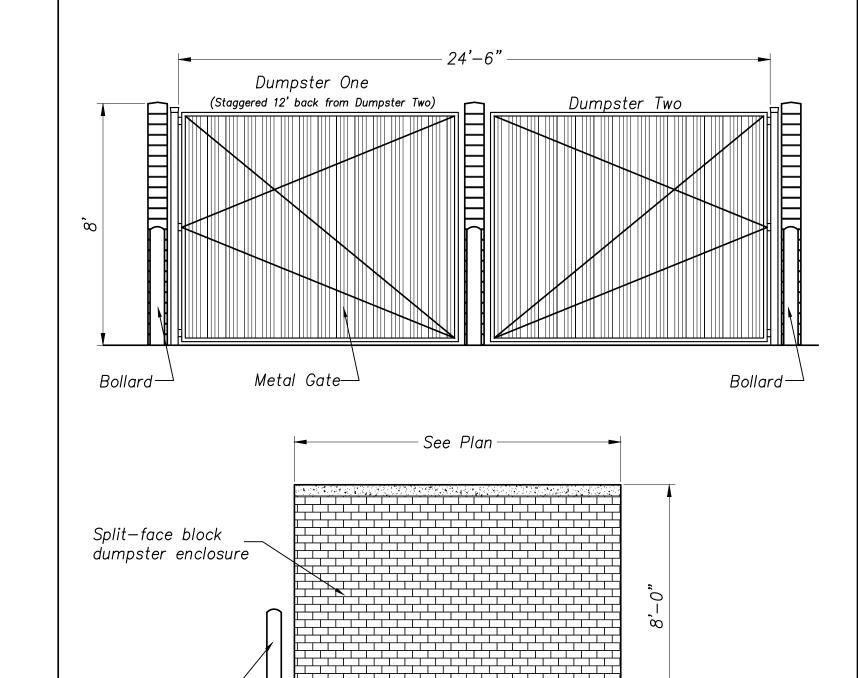
- a. Expansion joints shall be 1/2" wide with elastomeric filler, extending the full depth of the concrete located at a maximum spacing of 40'-0" and where sidewalk abuts concrete driveways, curb or other adjacent structures.
- b. Contraction joints shall be scored 1/2" deep and spaced at 5
- c. Formed joints shall be finished with a tool having a 1/4"
- d. Finish: Steel trowelled with a light broom texture perpendicular to the direction of travel.

3. <u>CURB</u>

- \overline{a} . Expansion joints shall be 1/2" wide with elastomeric filler, extending the full depth of the concrete, located at a maximum spacing of 80'-0".
- b. Contraction joints shall be scored 1/2" deep and spaced at 10'.

4. <u>CONCRETE PAVEMENT</u>

- a. Apply curing compound and provide light broom finish perpendicular to direction of traffic flow.
- b. Joints shall be in accordance with ACI 330 and shall not exceed 12' for a 6" thick slab and 15' for an 8" thick slab.
- c. Sawcut joints 2" deep and install silicon joint sealant.



DUMPSTER ENCLOSURE ELEVATIONS

Bollard

(Not To Scale)

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21-1913 **10** of **14**

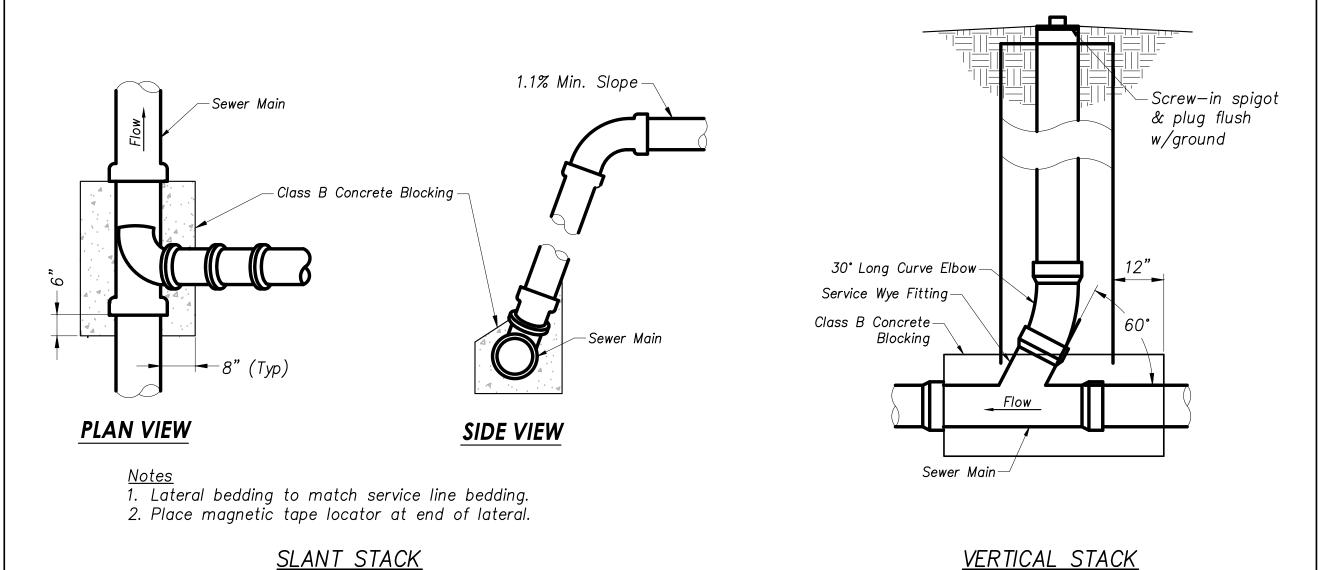
2 PER CITY OF MISHAWAKA REVIEW COMMENTS 1 PER CITY OF MISHAWAKA REVIEW COMMENTS

SAL 02/15/2022 PWW 01/27/2022 (Not To Scale)

1.25 Bc + 12" or Bc + 16

RIGID PIPE

Springline



SANITARY SEWER CONSTRUCTION NOTES

- 1. All sewer materials and construction shall be in accordance with the municipality's Construction Standards and these Construction Drawings.
- Sanitary sewer fittings shall conform to the requirements of ASTM D3034 with a minimum wall thickness of SDR 35, as defined in 7.4.1, and molded in one piece with elastometric joints and minimum socket depths as specified in Sections 6.2 and 7.3.2. PVC material shall have a cell classification of 12454-B and C as defined in ASTM D1784.
- 3. Contractor shall supply as—built record drawings to the Owner and Engineer upon completion of work.

STORM SEWER CONSTRUCTION NOTES

1. Contractor shall supply as—built record drawings to

Casting; –

This Sheet

See Casting Notes,

Outlet Pipe

the Owner and Engineer upon completion of work.

30" Dia.

1 — 6" (Typ. Each Side)

2 PER CITY OF MISHAWAKA REVIEW COMMENTS

1 PER CITY OF MISHAWAKA REVIEW COMMENTS

—Rim Elevation

(See Str. Notes)

Precast Reinforced

Concrete Structure

complying w/ ASTM C478

— A−Lok Watertight

Joint (Typ)

/- Compacted Stone

or Sand Cushion

Inlet Pipe

(Where Spec'd.)

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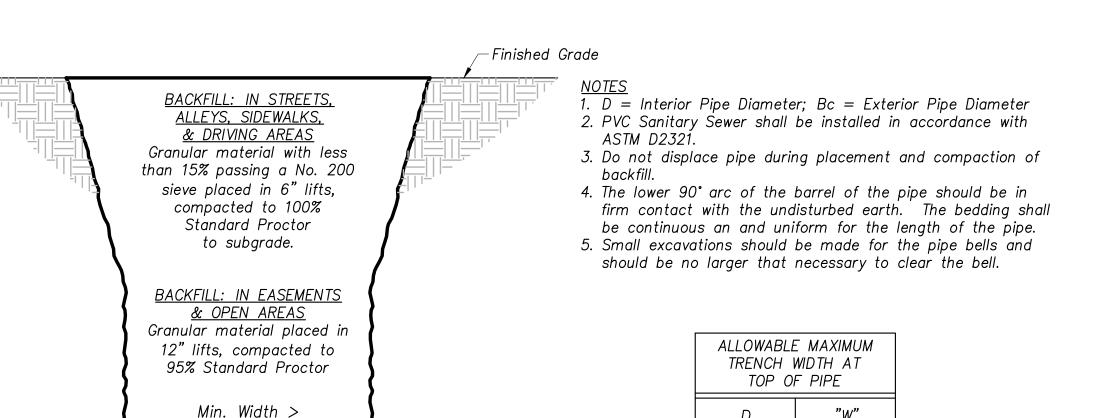
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	ALLOWABLE MAXIMUM TRENCH WIDTH AT TOP OF PIPE		
	D	"W"	
	6"	27"	
—Hand placed, mechanically tamped	8"	27"	
suitable on—site granular material free from debris, organic material, stones, etc. placed in maximum 6" lifts, filling all voids around pipe or place flowable fill with a min. 200 psi design mix.	10"	30"	
	12"	33"	
	15"	36"	
	18"	39"	
	21"	42"	
— Mechanically tamped suitable	24"	48"	
excavated material backfill	27"	51"	
placed in maximum 4" lifts	30"	57"	
	36"	68"	
	42"	75"	
ed pipe on undisturbed	48"	82"	
- p.p.o o., analotarboa			

An allowable "W" of 30" will be permitted where depth of cut exceeds 12 ft. and extra strength pipe is specified.

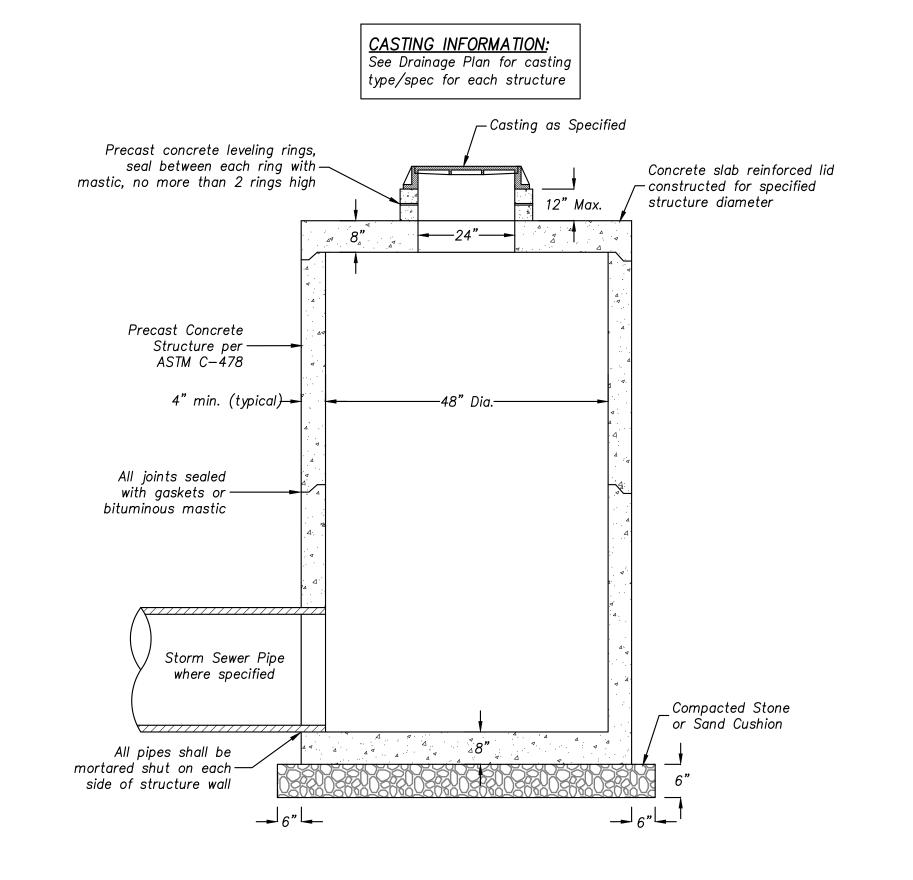
PIPE BEDDING TYPICAL DETAIL

-Firmly bed pipe on undisturbed

ground; Excavate for bells; No

weight shall be supported by bells

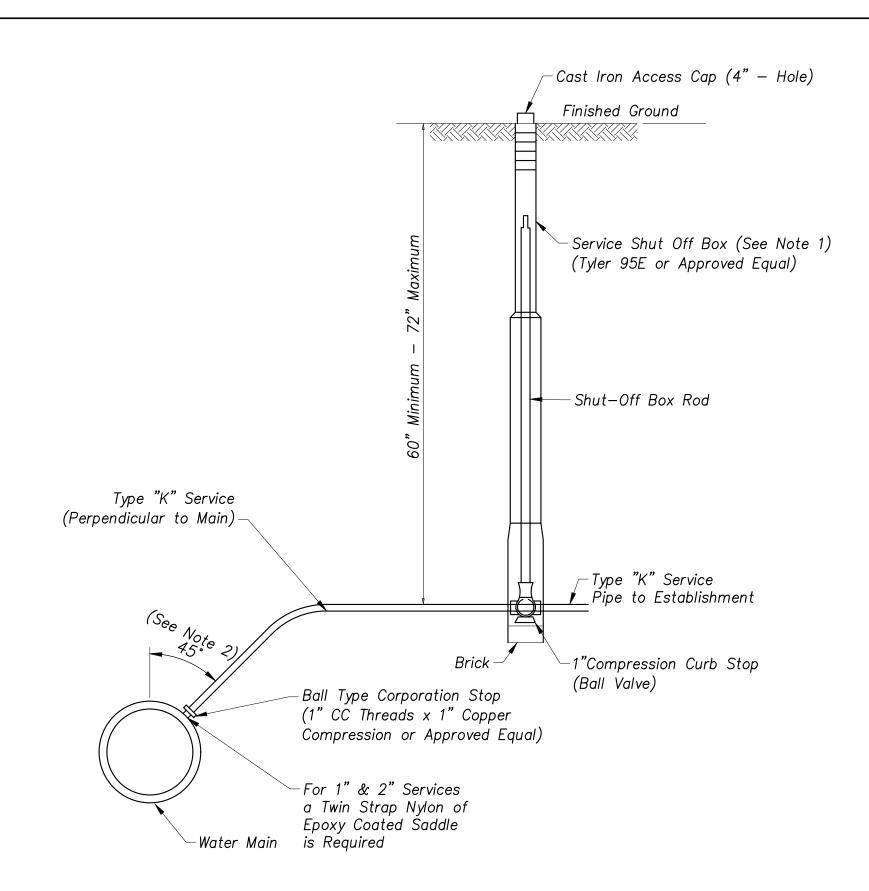
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STANDARD 48" STORM MANHOLE (Not To Scale)

CATCH BASIN TYPICAL DETAIL

(Not To Scale)

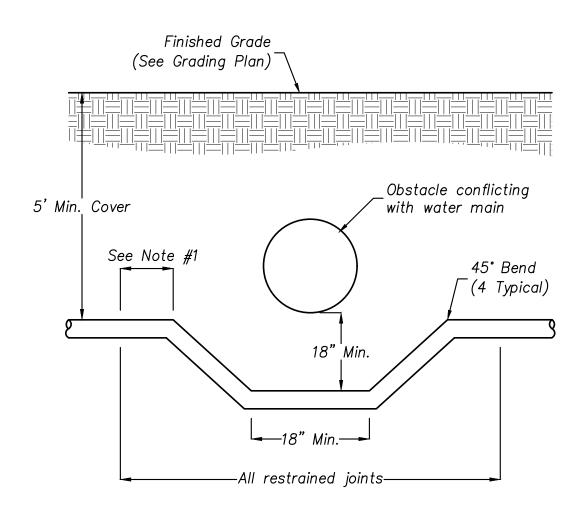


NOTES

- 1. Service shut—off box shall be placed in the public right—of—way in grass between curb and sidewalk.
- 2. For a 2" Service the corporation stop shall be located at 90° (level).

TYPICAL WATER CONNECTION DETAIL

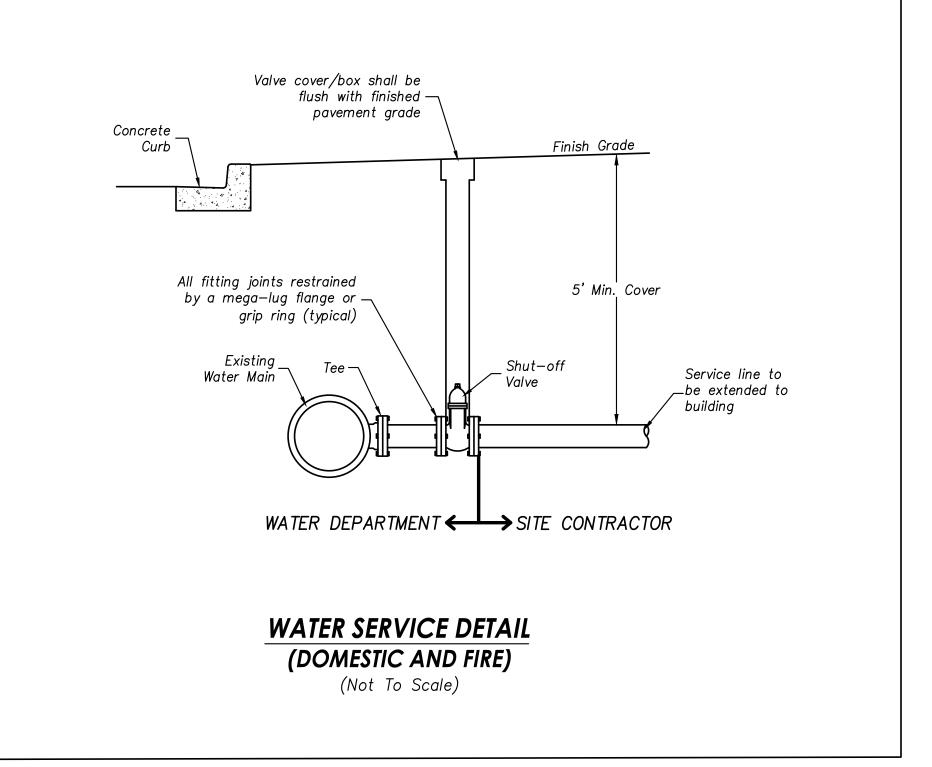
(Not To Scale)



NOTES:

- 1. Minimum restrained joint length required for the given pipe size, depth, material, soil condition, etc. Use 1.5:1 safety factor and 150 psi test pressure (Typical Each Side)
- 2. Provide adequate support if the obstacle is in place before the water main is constructed.

WATER LINE/UTILITY CONFLICT
TYPICAL CROSSING DETAIL
(Not To Scale)



WATER SERVICE CONSTRUCTION NOTES

- Water pipe materials and construction shall be in accordance with the construction standards of the jurisdictional municipality, AWWA Standards, and these Construction Drawings.
- 2. Water services (less than 4—inch diameter) shall be Type 'K' Copper.
- 3. Retainer glands shall be provided on all valves and fittings in accordance with the jurisdictional municipality standards.
- 4. Water service shall have a minimum cover of 5 feet.
- 5. Water pipe shall be backfilled in accordance with the requirements as set forth in the plans for rigid pipe beneath pavement.
- 6. Maintain a minimum horizontal clear separation 10 feet between water and sewer pipes. Where water and sewer pipes cross, maintain a minimum vertical clear separation of 18 inches. If separation cannot be met, the sewer pipe shall be constructed of water grade pipe meeting AWWA Standards for a distance of 10 feet each side of the water pipe. At crossings, one full length of water pipe shall be installed so that the joints will be as far from the sewer pipe as possible.
- 7. All tees, plugs, valves, dead ends, reducers, and bends shall be installed with a restrained joint in accordance with jurisdictional municipality standards.

315 W. Jefferson Blvd.
South Bend, IN 46601
South Bend, IN 46601
South Bend, IN 46601
Goshen
F 574.232.8700
Grand Haven
F 574.251.440
Abbart
Brainearing - Architecture - Land Surveying

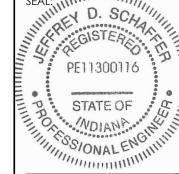
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JDS

QA/QC REVIEW:

PWW

DATE: 12/10/2021



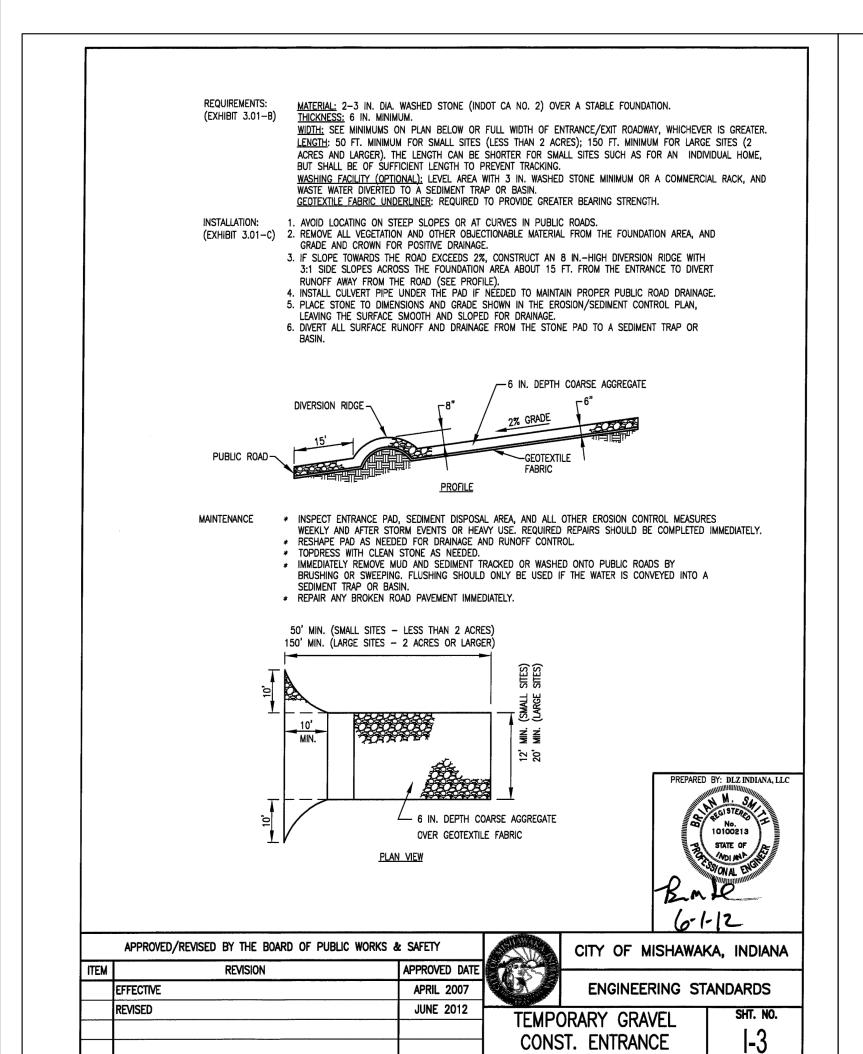
SIGNATURE: DATE: 02/21/2022

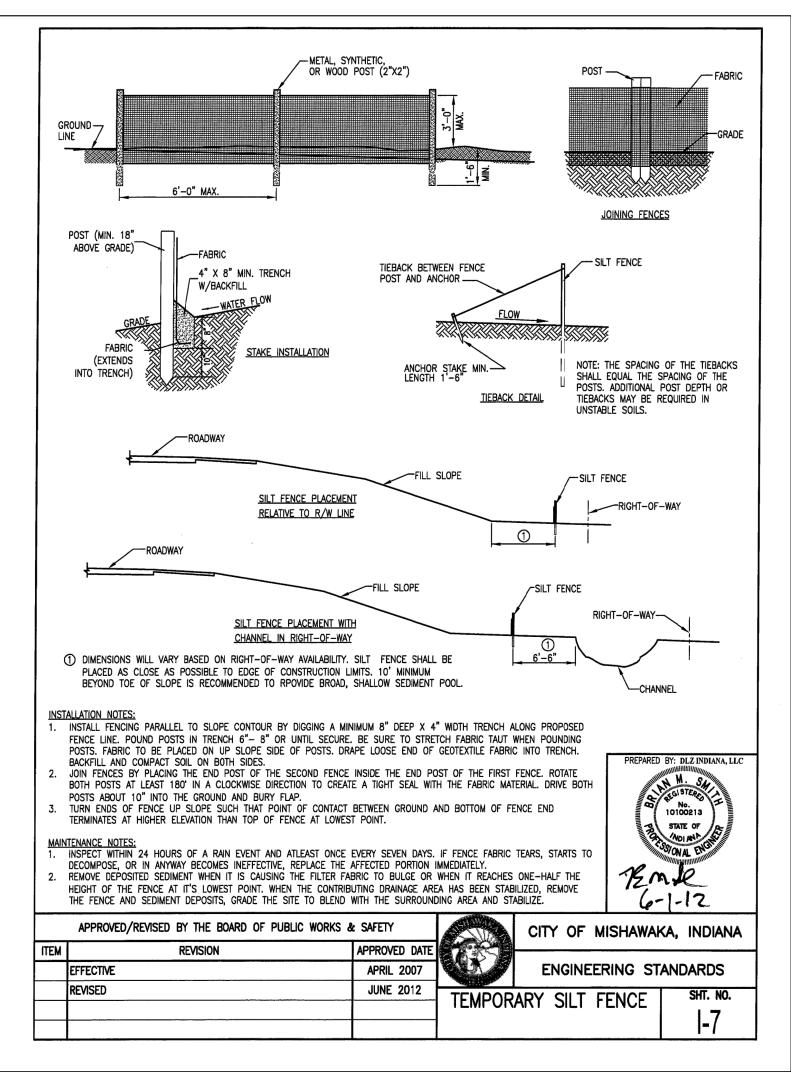
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21-1913 SHEET NO. 12 of 14

2 PER CITY OF MISHAWAKA REVIEW COMMENTS SAL 02/15/2022
1 PER CITY OF MISHAWAKA REVIEW COMMENTS PWW 01/27/2022





PROPOSED FEATURES LEGEND

(E1) Temporary Construction Entrance

Remove pavement & Vegetate exposed earth w/Seeding & Secured Mulch (if disturbed area remains idle for more than 15 days);
Erosion Control Blanket to be used on areas that fail to stabilize with seed and mulch

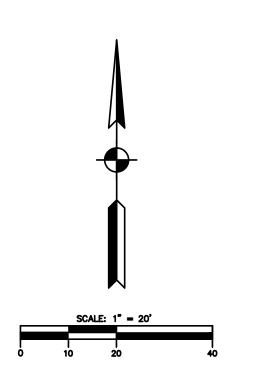
Temporary Soil Stockpile

(E5) Inlet Protection

Concrete Washout Structure;

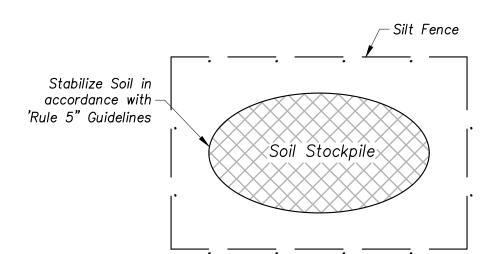
If concrete waste is returned to the concrete plant for disposal or concrete delivery trucks with self—contained washout systems are utilized, this BMP is not required.

Existing Vegetative Fiter Strip — Do Not Disturb



NOTES

- Temporary construction entrance(s) shall be installed and maintained to minimize the amount of soil tracked onto public/private roadways. A tentative location is shown on the plan. The Contractor shall submit actual location(s) to the Owner for approval. Entrance(s) shall be installed prior to any other construction activity. See "Temporary Construction Entrance" detail.
- Storm sewer inlets within the construction limits and existing inlets nearby that may be impacted by
 construction shall be protected as specified on this plan or an approved equal. The intent of this measure is
 to prevent sediment from entering the drainage system. See inlet protection detail(s).
- 3. Until the project is accepted by the Owner, the Contractor shall maintain all erosion control measures to prevent sediment from entering public and private storm sewers and from leaving the project site. Contractor shall implement and maintain any additional measures at the request of the Local Inspectors at no additional cost.
- 4. The location shown on the plan for the concrete washout structure is tentative and subject to change by the Contractor and Owner prior to construction. See "Concrete Washout" detail.
- 5. Soil material shall be temporarily stockpiled onsite as necessary during construction and any excess material not needed shall be hauled away and disposed of in accordance with local, state and federal guidelines.
- 6. Locations for temporary construction staging and dewatering operations (if required) shall be determined by the Contractor and Owner prior to construction. These locations shall be provided to the municipality prior to construction of said items and adequate protection installed to protect public and private drainage systems.
- 7. All areas disturbed by construction shall be stabilized with seeding measures. Temporary Seeding shall take place as soon as possible on any bare or thinly vegetated areas which have less than 70 percent cover and will remain inactive for a period of 15 days or more. Temporary and Permanent Seeding shall be in accordance with the Indiana Storm Water Quality Manual.
- 8. Erosion Control Blankets, where specified, shall be North American Green DS—150 or approved equal. Contractor shall follow the manufacturer's guidelines for installation and maintenance. See temporary slope stabilization
- 9. All work performed within city right—of—way shall conform with municipal standards and details.



<u>INSTALLATION</u>

1. Storage area shall be free of stumps, rock and construction debris.

- 2. Cover stockpile with vegetation and tarp.
- 3. Surround with sediment barrier or filter. See "Silt Fence" detail. If straw bales are utilized, place a minimum of 10 feet from the toe of slope. Each bale shall entrenched a minimum of 4 inches into subsoil and shall be anchored with (2) 36—inch long steel rebars or 2x2 inch wood stakes driven through the bale. The minimum bale size shall be 14"x18"x36".
- 4. Backfill the trench with soil material and compact it in place.

MAINTENANCE 1. Inspect daily.

2. Check for damage to perimeter barrier; repair immediately.

TEMPORARY SOIL STOCKPILE (Not To Scale)

2	PER CITY OF MISHAWAKA REVIEW COMMENTS	SAL	02/18/2022	
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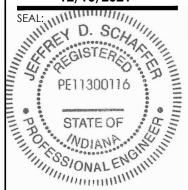
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DESIGNED BY:
PWW

PM REVIEW:

QA/QC REVIEW:

DATE: 12/10/2021



DATE:

02/21/2022 SCALE:

HORZ: 1" = 20'
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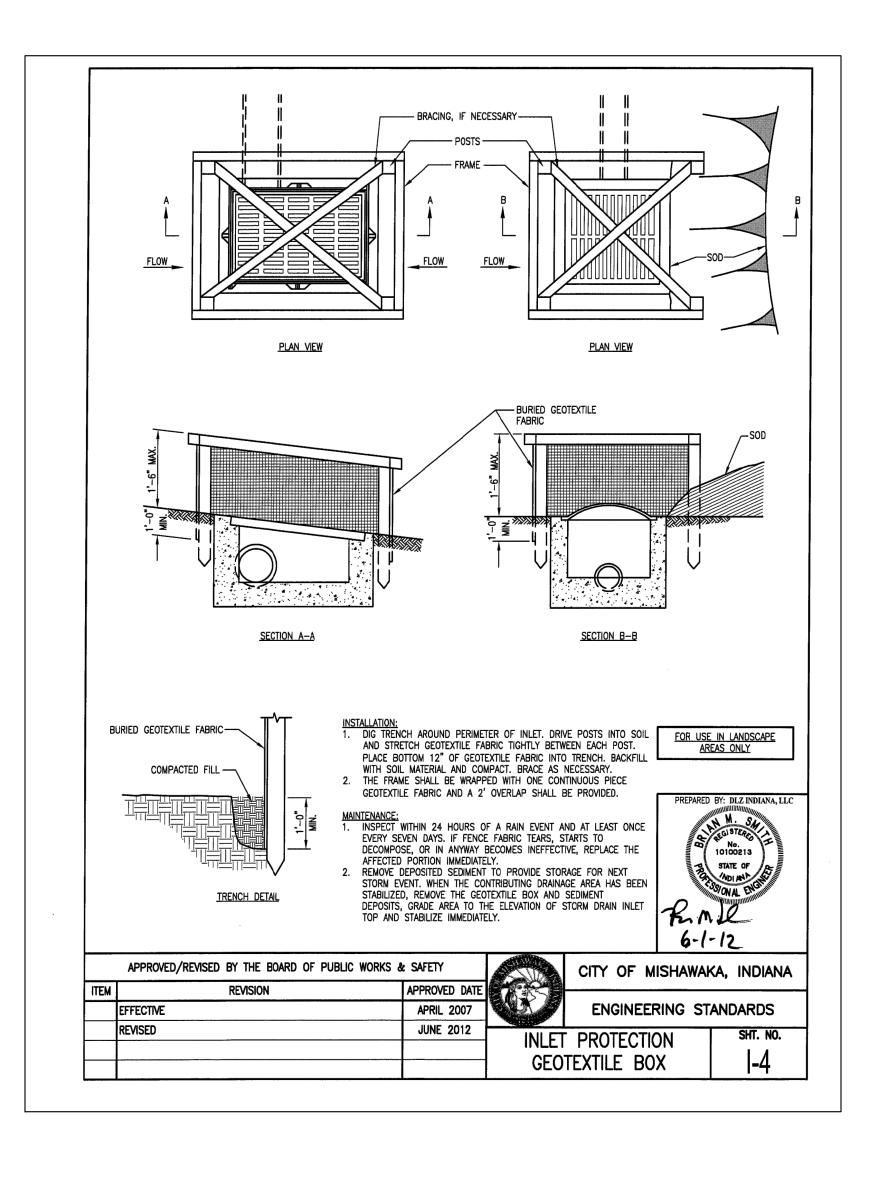
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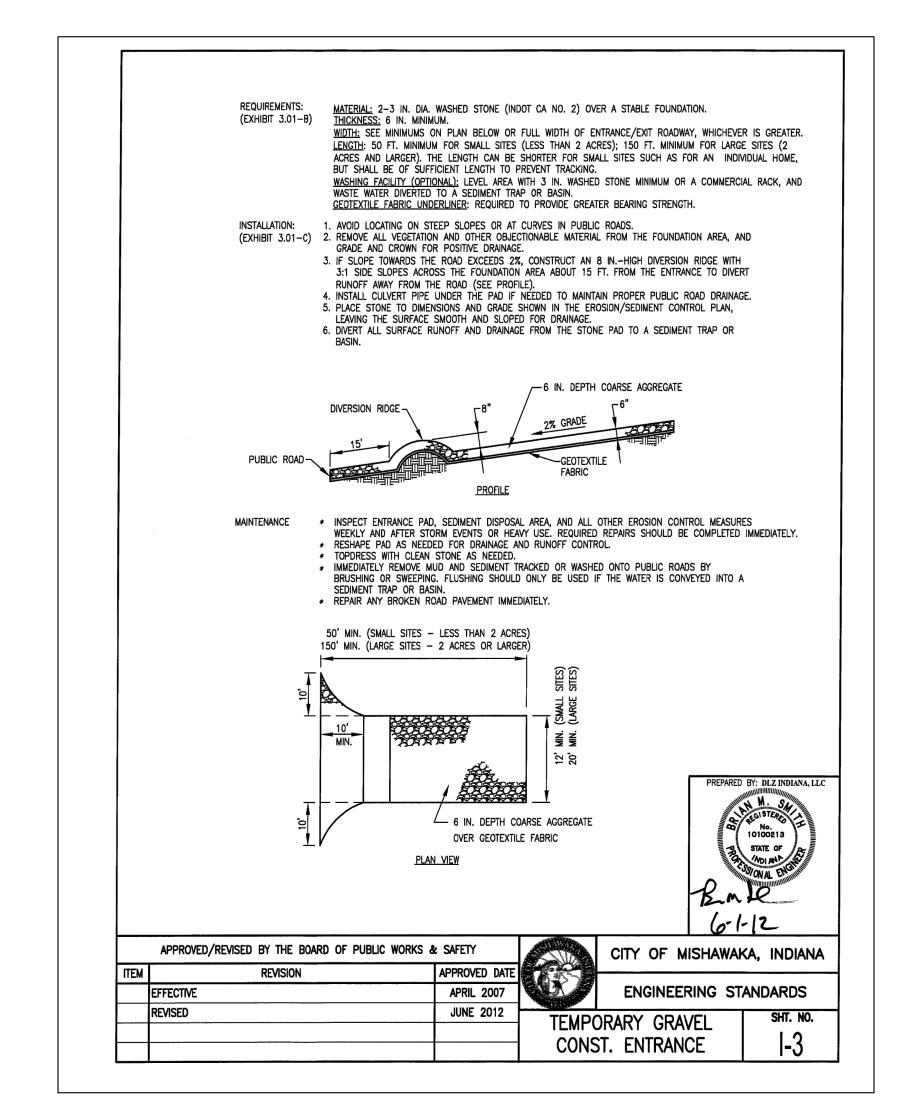
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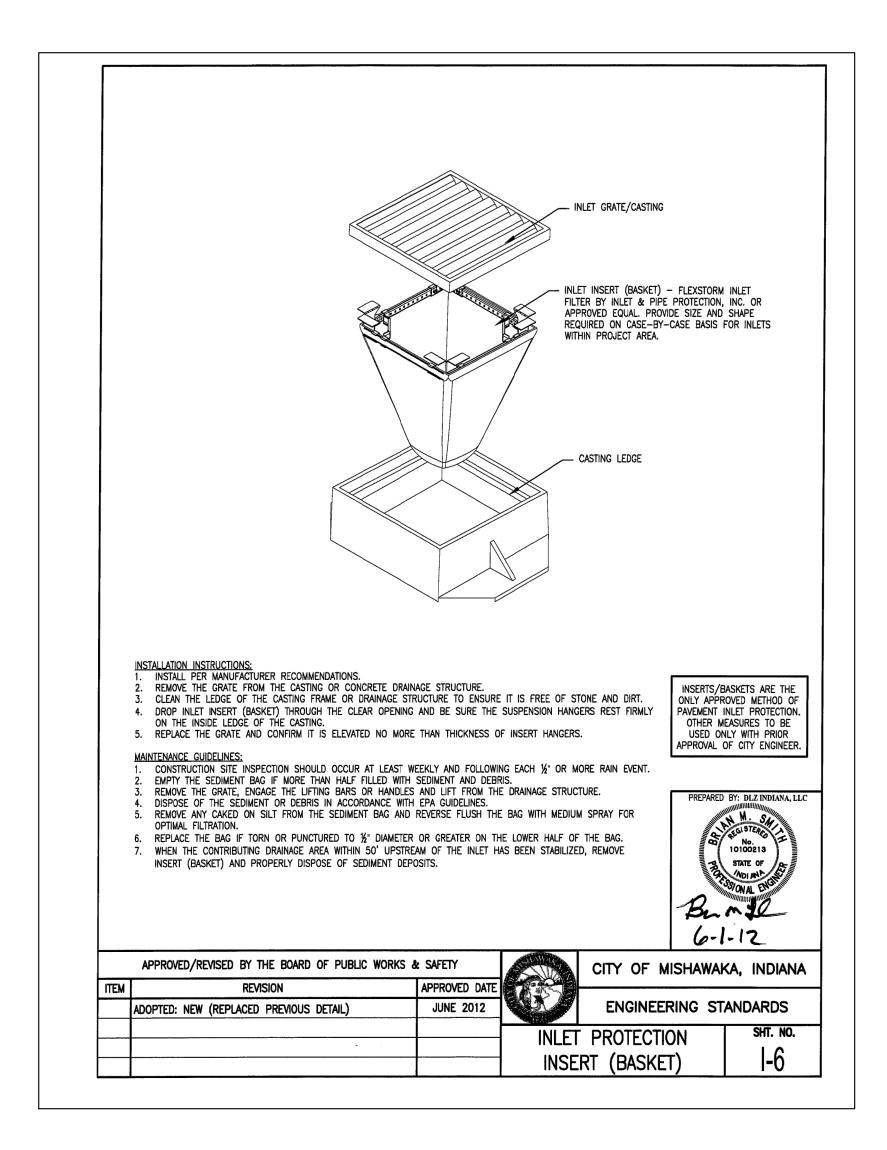
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2 PER CITY OF MISHAWAKA REVIEW COMMENTS 1 PER CITY OF MISHAWAKA REVIEW COMMENTS