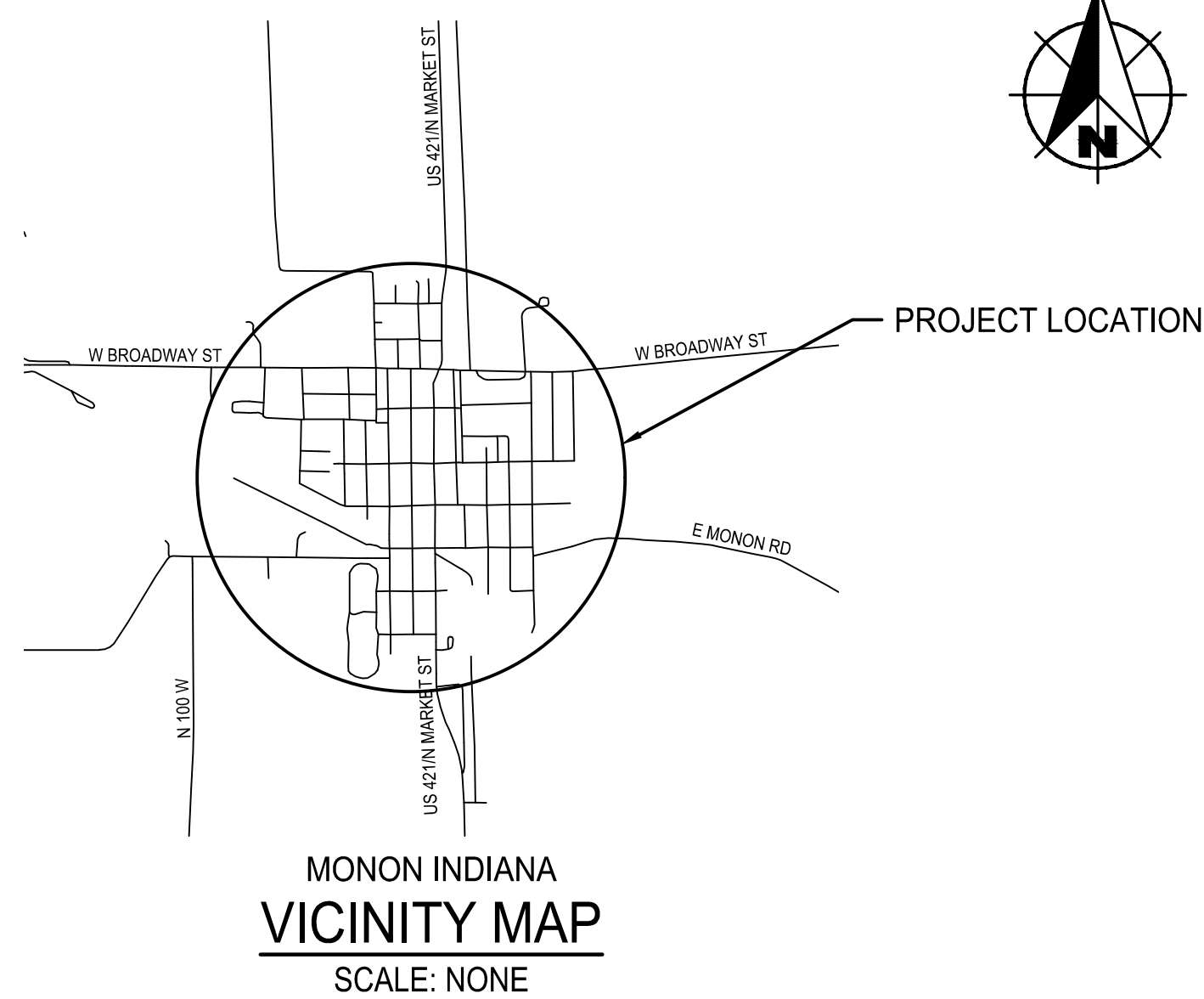
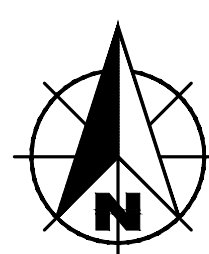


2018 SANITARY SEWER REHABILITATION FOR THE TOWN OF MONON MONON, INDIANA



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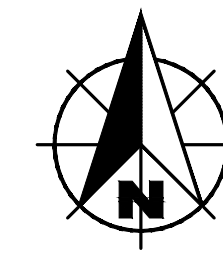
TOWN OF MONON

ROSEMARY COOLEY, PRESIDENT
STACY SELAGY, VICE PRESIDENT
KEN KICKMAN, MEMBER
KIRK QUASEBARTH, MEMBER
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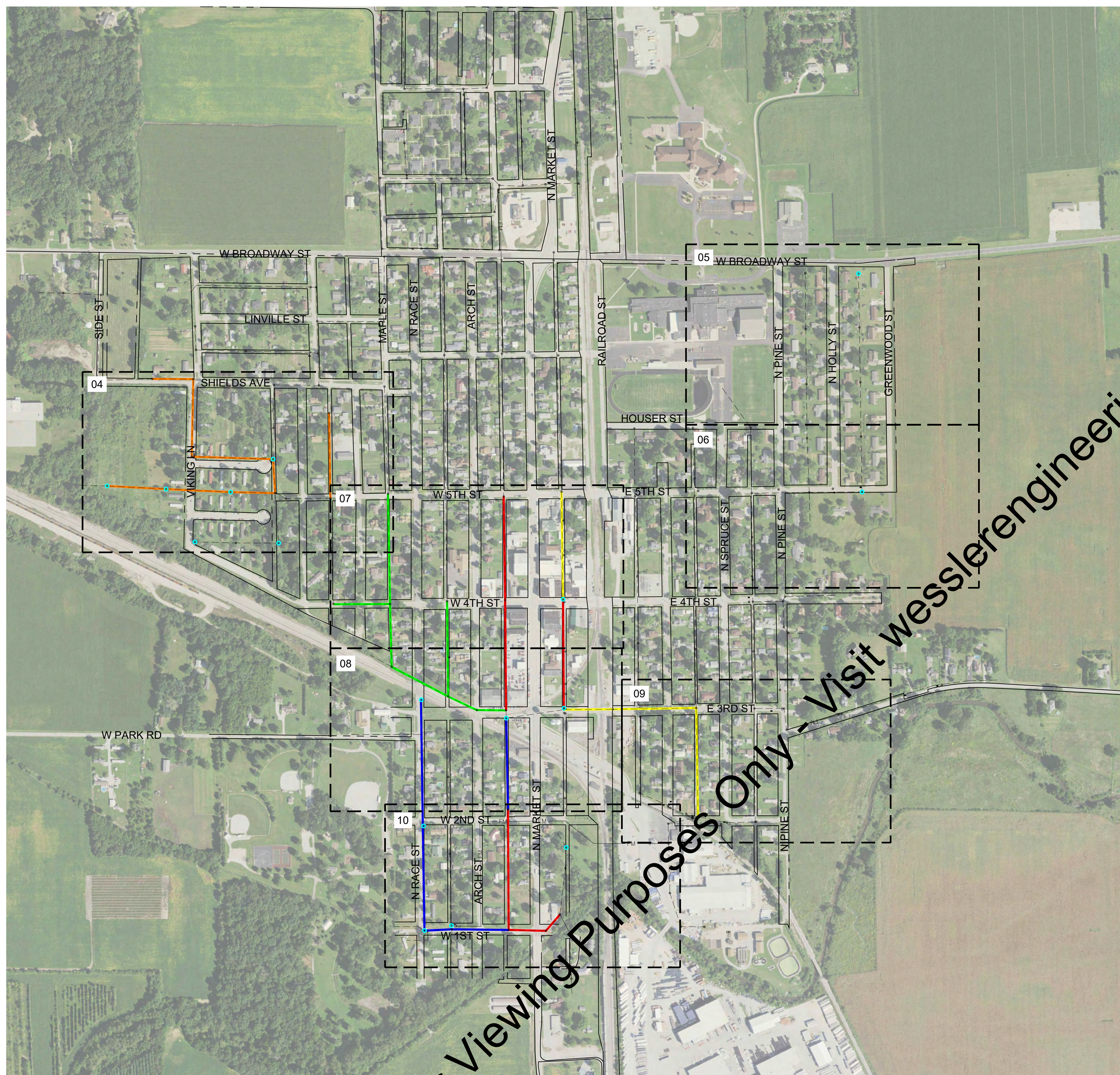
MAY 2018

	<p>JONATHAN E. BORGERS REGISTERED ENGINEER STATE OF INDIANA NO. 10101227</p>
	<p>JOSEPH K. BARTOS REGISTERED ENGINEER STATE OF INDIANA NO. 11700443</p>

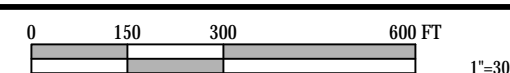
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DRAWING INDEX	
SHEET NO.	DESCRIPTION
GENERAL	
01	TITLE SHEET
02	LOCATION AND SCOPE OF WORK PLAN AND INDEX
03	GENERAL NOTES
PLAN SHEETS	
04 - 10	REHAB PLANS
MISCELLANEOUS DETAILS	
11 - 12	MISCELLANEOUS DETAILS
EROSION CONTROL	
13 - 14	EROSION CONTROL DETAILS

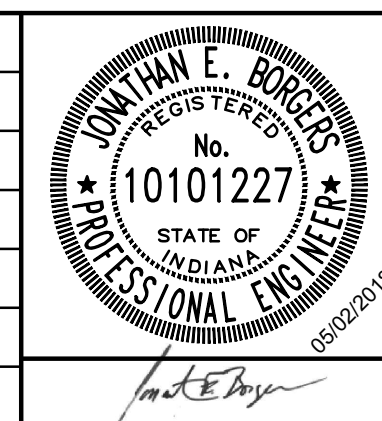


LOCATION AND SCOPE OF WORK PLAN



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	CHECKED BY	JKB				
	APPROVED BY	BAS				
	ISSUE DATE	MAY 2018				
	PROJECT NUMBER	185416-04-001				



2018 SANITARY SEWER REHABILITATION	
TOWN OF MONON MONON, INDIANA	
LOCATION AND SCOPE OF WORK PLAN AND INDEX	

SHEET NO.	02
TOTAL SHEETS	14

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EXISTING FEATURES LEGEND

SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION
	BENCH MARK		CISTERN		EASEMENT - CONSTRUCTION/PERMANENT
	TEMPORARY BENCH MARK		ELECTRIC METER		LOT BOUNDARY
	SOIL BORING LOCATION		AIR CONDITIONING UNIT		PROPERTY BOUNDARY
	SECTION CORNER		UTILITY RISER (DEFINED BY UTILITY)		RIGHT-OF-WAY - TEMPORARY/PERMANENT
	DRILL HOLE IN CONCRETE/HARRISON MONUMENT		UTILITY PEDESTAL (DEFINED BY UTILITY)		SECTION BOUNDARY
	CONTROL POINT (SET/FOUND)		UTILITY MARKER (DEFINED BY UTILITY)		WETLANDS
	MAGNETIC NAIL (SET/FOUND)		JOINT POWER/TELEPHONE POLE		CONTOUR - INTERMEDIATE ELEVATION
	BOAT SPIKE (SET/FOUND)		LIGHT POLE		CONTOUR - INDEX ELEVATION
	PK NAIL (SET/FOUND)		LIGHT ON POWER POLE		OVERHEAD ELECTRIC
	RAILROAD SPIKE (SET/FOUND)		LIGHT ON JOINT POLE		OVERHEAD CABLE TV
	R/W MARKER - CONCRETE/GRANITE/STONE		POWER POLE		OVERHEAD TELEPHONE
	IRON PIPE/IRON PIN/REBAR (WITH DIAMETER)		TELEPHONE POLE		UNDERGROUND CABLE TV
	BRASS PLUG		LAMP POST		UNDERGROUND ELECTRIC
	CABLE TV MANHOLE		GUY ANCHOR		UNDERGROUND FIBER OPTIC
	ELECTRIC MANHOLE		GUY POLE OR STUB		GAS MAIN
	GAS MANHOLE		CONTROLLER CABINET		DIGESTER GAS
	OTHER MANHOLE		FLAG POLE		PETROLEUM MAIN
	TELEPHONE MANHOLE		POST		UNDERGROUND TELEPHONE
	TELEPHONE VAULT		GROUND LIGHT		WATER MAIN
	TRAFFIC MANHOLE		MAILBOX		WATER SERVICE
	TRAFFIC HANDHOLE		DOUBLE/MULTIPLE MAILBOX		FORCE MAIN
	WATER MANHOLE		MAST ARM POLE		GRAVITY SEWER PIPE
	AIR RELEASE VALVE		TRAFFIC SIGNAL STRAIN POLE		PLANT CHLORINE PIPE
	SANITARY SEWER MANHOLE		SIGNAL LOOP DETECTOR BOX		TOP OF BANK/TOE OF SLOPE
	DRAINAGE/STORM SEWER MANHOLE		SIGNAL LOOP DETECTOR LOOP		CENTERLINE OF DITCH/SWALE/STREAM
	SANITARY SEWER CLEANOUT		SIGN - SINGLE POST		FENCE - FIELD
	SEPTIC TANK		SIGN - DOUBLE POST		FENCE - METAL
	VALVE VAULT		SIGN - RAILROAD SIGNAL		FENCE - WOOD
	BEEHIVE INLET		SIGN - RAILROAD CROSSING		GUARDRAIL
	CURB INLET		BUSH		STREAM
	DROP INLET		STUMP		TREE/BRUSH LINE
	CATCH BASIN		TREE - CONIFEROUS		
	DOWNSPOUT		TREE - DECIDUOUS		
	GAS METER		ROCK OUTCROP		
	GAS VALVE		SATELLITE		
	GAS SERVICE VALVE				
	PETROLEUM VALVE				
	PETROLEUM SHUTOFF VALVE				
	GAS STATION MONITORING WELL				
	GAS STATION FILL CAP				
	NATURAL GAS WELL/STORAGE WELL				
	SPRINKLER HEAD				
	SPRINKLER CONTROL VALVE				
	WATER METER				
	WATER VALVE				
	WATER SERVICE VALVE				
	WATER WELL				
	WET WELL				
	FIRE HYDRANT				
	PROCESS VALVE				
	YARD HYDRANT				



TABLE OF ABBREVIATIONS

ABBREVIATION	DESCRIPTION	ABBREVIATION	DESCRIPTION
AFF	ABOVE FINISHED FLOOR	IPS	IRON PIPE SIZE
ALUM	ALUMINUM	ISPC	INDIANA STATE PLANE COORDINATE
APP	APPARENT	LB	POUND(S)
APPROX	APPROXIMATE(LY)	LF	LINEAR FEET
ASPH	ASPHALT	LN	LANE
ASSOC	ASSOCIATES	LS	LIFT STATION
ASTM	AMERICAN SOCIETY OF TESTING MATERIALS	MA EX	MATCH EXISTING
AVE	AVENUE	MJ	MECHANICAL JOINT
AVG	AVERAGE	MATL	MATERIAL
BLDG	BUILDING	MAX	MAXIMUM
BLVD	BOULEVARD	MH	MANHOLE
BM	BENCHMARK	MIN	MINIMUM
CO	CLEANOUT	MISC	MISCELLANEOUS
CI	CAST IRON	N	NORTHING, NORTH
CL	CENTER LINE	NGS	NATIONAL GEODETIC SURVEY
CMA	COLD MIX ASPHALT	NO.	NUMBER
CMP	CORRUGATED METAL PIPE	OC	ON CENTER
CMU	CONCRETE MASONRY UNIT	OD	OUTSIDE DIAMETER
CONC	CONCRETE	PC	POINT OF CURVE (BEGIN CURVE)
CONT	CONTINUOUS	POLY	POLYETHYLENE
CNR	CORNER	PI	POINT OF INTERSECTION
CP	CONTROL POINT	POT	POINT ON TANGENT
CPP	CORRUGATED PLASTIC PIPE	PT	POINT OF TANGENT (END CURVE)
CR STN	CRUSHED STONE	PSI	POUNDS PER SQUARE INCH
CYD	CUBIC YARD	P	POINT
D	DEPTH	PVC	POLYVINYL CHLORIDE
DI	DUCTILE IRON	R	RADIUS
DI MJ	DUCTILE IRON MECHANICAL JOINT	ROW	RIGHT-OF-WAY
DBL	DOUBLE	RCP	REINFORCED CONCRETE PIPE
DIA	DIAMETER	RD	ROAD
DIP	DUCTILE IRON PIPE	S	SOUTH
DIPS	DUCTILE IRON PIPE SIZE	SR	STATE ROUTE
DR	DRIVE	SST	STAINLESS STEEL
E	EASTING, EAST	SVA	SERVICE VALVE ASSEMBLY
EF	EACH FACE	SB	SOIL BORING
EW	EACH WAY	SCHED	SCHEDULE
EA	EACH	SDR	STANDARD DIMENSION RATIO
EJ	EAST JOINT IRON WORKS	SECT	SECTION
EL	ELEVATION	SF	SQUARE FEET
EX	EXTENSION	SHT	SHEET
EXP	EXTENSION	SPECS	SPECIFICATION(S)
FFE	FINISH FLOOR ELEVATION	SQ	SQUARE
FM	FORCE MAIN	SRF	STATE REVOLVING FUND
FND	FOUND	ST	STREET
FT	FEET	STA	STATION
F	FOOTING	SYD	SQUARE YARD
GALV	GALVANIZED	TBM	TEMPORARY BENCHMARK
GPS	GLOBAL POSITIONING SYSTEM	TC	TOP OF CASTING
HMA	HOT MIX ASPHALT	TYP	TYPICAL
HDPE	HIGH DENSITY POLYETHYLENE	USGS	US GEOLOGICAL SURVEY
HORIZ	HORIZONTAL	VERT	VERTICAL
ID	INSIDE DIAMETER	VLV	VALVE
IE	INVERT ELEVATION	W	WIDTH, WEST
INC	INCORPORATED	WSE	WATER SURFACE ELEVATION
INDOT	INDIANA DEPARTMENT OF TRANSPORTATION	YR	YEAR
INSTR	INSTRUMENT		
INV	INVERT		

*NOTE: THIS TABLE IS A LISTING OF TYPICAL ABBREVIATIONS AND MAY NOT INCLUDE ALL ABBREVIATIONS FOUND WITHIN THIS PLAN SET. IF A QUESTION ARISES ON THE MEANING OF AN ABBREVIATION NOT LISTED IN THIS TABLE, PLEASE CONTACT THE ENGINEER FOR CLARIFICATION.

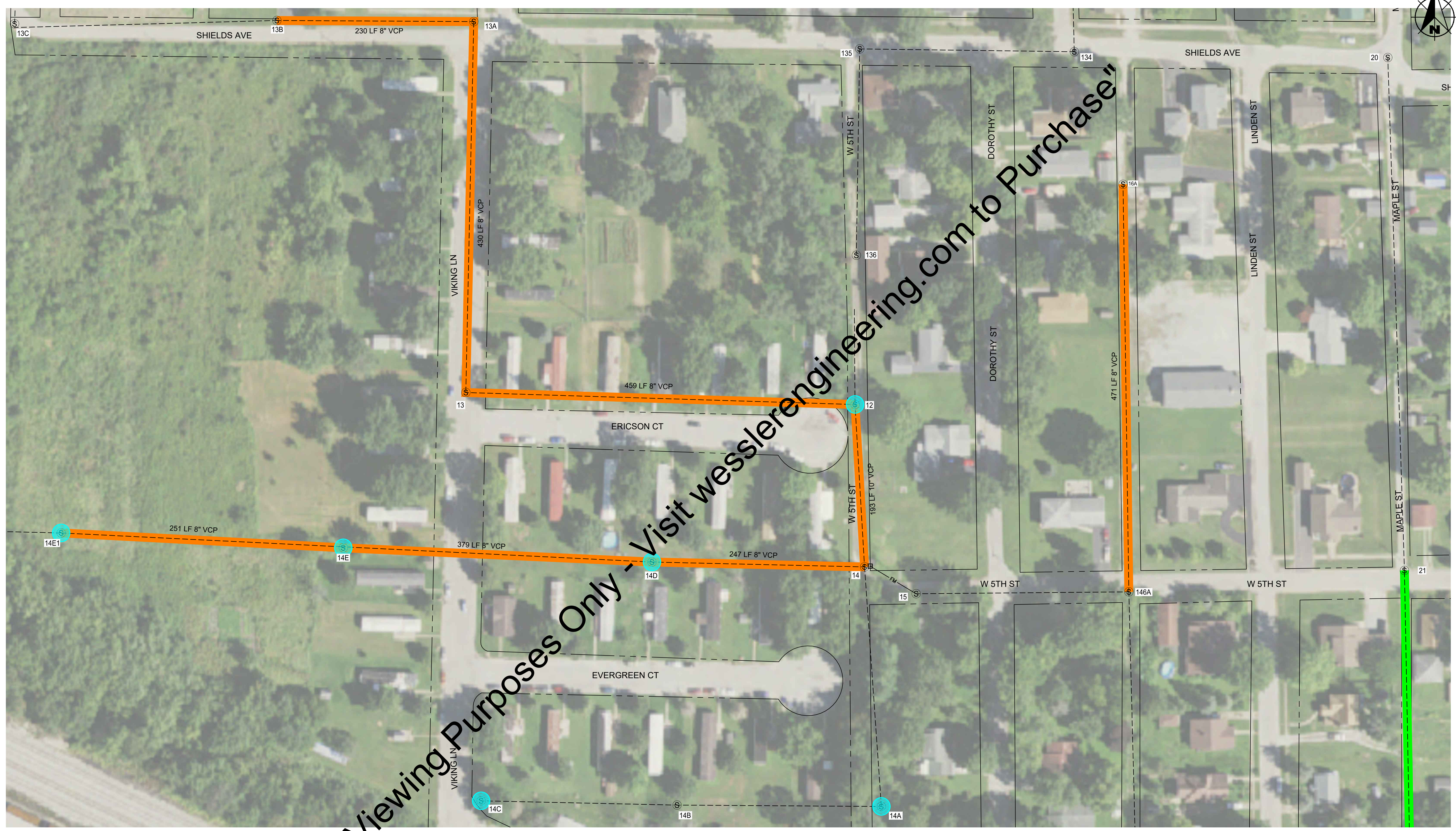
- GENERAL NOTES:
- NOTIFY THE ENGINEER IF ANY CONFLICTING INFORMATION BECOMES APPARENT IN THE CONTRACT DOCUMENTS AS SOON AS POSSIBLE AND PRIOR TO THE COMMENCEMENT OF ANY WORK IN THE VICINITY OF OR RELATIVE TO THE APPARENT CONFLICT SO THAT CLARIFICATION MAY OCCUR PRIOR TO CONSTRUCTION.
 - ANY ALTERATIONS TO THESE DRAWINGS NOT AUTHORIZED BY WESSLER ENGINEERING AND NOT IN ACCORDANCE WITH THE DRAWINGS, SPECIFICATIONS AND RECORDS ON FILE AT WESSLER ENGINEERING SHALL BE THE RESPONSIBILITY OF THE ENGINEER RESPONSIBLE FOR THE ACCURACY OF THE DRAWINGS.
 - USE CAUTION DURING THE EXECUTION OF WORK TO PREVENT DAMAGE TO STATE, COUNTY, MUNICIPAL, AND PRIVATE PROPERTY. REPAIR ALL DAMAGES AS A RESULT OF OPERATIONS, INCLUDING DAMAGE TO DRAINAGE STRUCTURES, FIELD TILES, PUBLIC/PRIVATE ROADS, AND LANDSCAPING (INCLUDING FENCING). REPAIR AND REPLACE DAMAGED ITEMS AT NO ADDITIONAL COST TO THE OWNER. PERFORM ALL REPAIR AND REPLACEMENT WORK TO THE SATISFACTION OF THE PERMITTING AGENCY, THE OWNER AND THE ENGINEER. TAKE CARE TO AVOID DAMAGE TO PAVED AREAS WHICH ARE NOT SPECIFICALLY CALLED OUT FOR REPAIR OR REPLACEMENT. REPAIR, OR REPLACE ALL SUCH PAVEMENTS WHICH ARE DAMAGED BY CONSTRUCTION ACTIVITIES AND CONSTRUCTION TRAFFIC AT NO ADDITIONAL COST TO THE OWNER.
 - OBTAIN ALL TEMPORARY EASEMENTS REQUIRED FOR THE CONSTRUCTION OF THE PROJECT AT NO ADDITIONAL COST TO THE OWNER.
 - COMPLY WITH ALL APPLICABLE PERMITS AND REGULATIONS. APPLICABLE PERMITS ISSUED TO THE OWNER WILL BE MADE AVAILABLE TO THE CONTRACTOR. CONTACT ALL APPLICABLE PERMITTING AGENCIES WITHIN THE TIME PERIOD SPECIFIED BY THAT AGENCY PRIOR TO BEGINNING CONSTRUCTION.
 - ALL PRIVATE WELL LOCATIONS SHOWN ON THE DRAWINGS ARE APPROXIMATE. FIELD VERIFY AND DETERMINE EXACT LOCATIONS OF ALL PRIVATE WELLS IN THE PROJECT AREA.
 - ALL EXISTING AND NEW UTILITY INFORMATION, INCLUDING BUT NOT LIMITED TO LOCATION, SIZE AND INVERT ELEVATION, IS SHOWN BASED UPON AVAILABLE INFORMATION. THE ENGINEER DOES NOT GUARANTEE OR ASSUME SUCH INFORMATION TO BE TRUE, ACCURATE, ALL INCLUSIVE OR EVEN APPROXIMATE. CONTACT THE INDIANA UNDERGROUND PLANT PROTECTION SERVICE (IUPPS) AT LEAST FORTY-EIGHT (48) HOURS IN ADVANCE OF ANY CONSTRUCTION ACTIVITY. CONTACT NON-MEMBER UTILITIES DIRECTLY.
 - DETERMINE WHICH UTILITIES MAY CONFLICT WITH WORK AND VERIFY THEIR LOCATION, SIZE AND ELEVATION PRIOR TO CONSTRUCTION AND DETERMINE IF THERE ARE ANY DISCREPANCIES OR CONFLICTS. IF ANY DISCREPANCIES OR CONFLICTS ARE DISCOVERED, NOTIFY THE ENGINEER AS SOON AS POSSIBLE.
 - EXISTING UTILITY SERVICE LINES TO INDIVIDUAL CUSTOMERS MAY NOT BE SHOWN ON THE DRAWINGS. ASSUME THAT UNDERGROUND SERVICE LINES FOR ALL UTILITIES EXIST TO EACH PROPERTY ALONG THE ROUTE OF THE PLANNED IMPROVEMENTS.
 - COORDINATE ALL WORK WITH THE RESPECTIVE UTILITIES. SCHEDULE WORK ACCORDINGLY, AND NOTIFY ALL UTILITIES A MINIMUM OF TWO (2) WEEKS IN ADVANCE OF ANY CONSTRUCTION ACTIVITY.
 - COORDINATE PLANNED UTILITY SERVICE INTERRUPTIONS WITH THE RESPECTIVE UTILITIES AND THE UTILITIES AFFECTED CUSTOMERS. SERVICE INTERRUPTIONS SHOULD NOT LAST MORE THAN FOUR (4) HOURS. GIVE WRITTEN NOTICE TO ALL AFFECTED UTILITY CUSTOMERS AND PROPERTY OWNERS AT LEAST TWENTY-FOUR (24) HOURS BUT NOT MORE THAN SEVENTY-TWO (72) HOURS PRIOR TO ANY PLANNED INTERRUPTION OF UTILITY SERVICE.
 - USE CAUTION DURING THE EXECUTION OF WORK TO PREVENT DAMAGE TO EXISTING UTILITIES. REPAIR OR REPLACE ALL PUBLIC AND PRIVATE FACILITIES DAMAGED AS A RESULT OF CONSTRUCTION OPERATIONS. BRACE AND PROTECT ALL UTILITY POLES AND EXISTING STRUCTURES ADJACENT TO NEW EXCAVATIONS. UTILITY POLE BRACING SHALL BE AS DIRECTED BY THE GOVERNING UTILITY.
 - DO NOT DISTURB EXISTING MANHOLES OR INLETS, UNLESS NOTED OTHERWISE.
 - ALL EQUIPMENT, APPURTENANCES AND PIPING REMOVED AS PART OF THE DEMOLITION SHALL FIRST BE OFFERED TO THE OWNER FOR SALVAGE. DELIVER SALVAGED ITEMS SELECTED BY OWNER TO A LOCATION DESIGNATED BY THE OWNER OR ENGINEER. IN THE EVENT THE OWNER DOES NOT ELECT TO KEEP THE REMOVED ITEMS, REMOVE SUCH ITEMS FROM THE SITE AND DISPOSE OF AT A LOCATION APPROVED FOR SUCH DISPOSAL AT THE CONTRACTOR'S EXPENSE.
 - COORDINATE STAGING AREA LOCATIONS WITH THE OWNER.
 - ALL CONSTRUCTION TRAFFIC SHALL USE MAJOR ROADS. NO CONSTRUCTION TRAFFIC SHALL USE LOCAL STREETS FOR INDIRECT ACCESS.
 - TO CONTROL DUST, REMOVE SOIL FROM STREETS USED BY CONSTRUCTION TRAFFIC DAILY, VACUUM AND WATER AS NECESSARY AND/OR AS DIRECTED BY THE OWNER.
 - PLACE NEW ASPHALT PAVEMENT FLUSH WITH ADA RAMPS.
 - LENGTHS OF SEWERS AS SHOWN ON THE DRAWINGS AND INDICATED AS LINEAR FEET (LF) ARE FROM CENTER TO CENTER OF STRUCTURES.
 - NORTHING AND EASTING INFORMATION IS GIVEN AT CENTER OF STRUCTURE UNLESS OTHERWISE NOTED.
 - VERIFY EXISTING SEWER INVERTS AND LOCATIONS PRIOR TO CONSTRUCTION AND DETERMINE IF THERE ARE ANY DISCREPANCIES OR CONFLICTS.
 - RESET ALL MAILBOXES AND SIGNS DISTURBED BY CONSTRUCTION ACTIVITIES.

UTILITY CONTACTS

COMMUNICATIONS	CABLE	GAS & ELECTRIC	WATER	WASTEWATER	STORMWATER
XFINITY STORE 101 E 5TH STREET MONON, IN 47959 219-243-6017	XFINITY STORE 101 E 5TH STREET MONON, IN 47959 219-243-6017	NORTHERN INDIANA PUBLIC SERVICE COMPANY (NIPSCO) 801 E. 86TH AVE MERRILLVILLE, IN 46410 800-464-7726	MONON TOWN HALL 422 MARKET STREET MONON, IN 47959 P.O. BOX 657 219-253-6441 ATTN: DEBBIE REINDT, DEPUTY CLERK-TREASURER	MONON TOWN HALL 422 MARKET STREET MONON, IN 47959 P.O. BOX 657 219-253-6441 ATTN: DEBBIE REINDT, DEPUTY CLERK-TREASURER	MONON TOWN HALL 422 MARKET STREET MONON, IN 47959 P.O. BOX 657 219-253-6441 ATTN: DEBBIE REINDT, DEPUTY CLERK-TREASURER
MONON TELEPHONE CO 311 N MARKET STREET MONON, IN 47959 219-253-6601					

*NOTE: THIS TABLE IS A LISTING OF TYPICAL EXISTING SYMBOLS AND MAY NOT INCLUDE ALL EXISTING SYMBOLS FOUND WITHIN THIS PLAN SET. ALL PROPOSED ITEMS WILL BE CALLED OUT ON THEIR PLAN SHEETS. IF A QUESTION ARISES ON THE MEANING OF ANY SYMBOL NOT LISTED IN THIS TABLE, PLEASE CONTACT THE ENGINEER FOR CLARIFICATION. THESE SYMBOLS ARE NOT TO SCALE.

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	CHECKED BY	JKB								03
	APPROVED BY	BAS								
	ISSUE DATE	MAY 2018								
PROJECT NUMBER	185416-04-001		TOTAL SHEETS	14						



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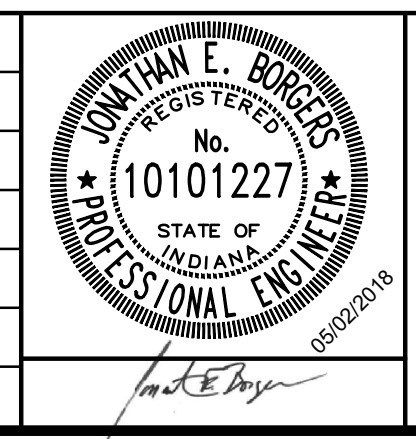
REHAB PLAN
SCALE: 1" = 50'



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LEGEND	
146A	MANHOLE NUMBER
S	EXISTING MANHOLE
---	EXISTING SANITARY
FM	EXISTING FORCEMAIN
S	PROPOSED MANHOLE REHABILITATION
█	BASE BID REHABILITATION WITH CIPP
█	ALTERNATE NO. 1 REHABILITATION WITH CIPP
█	ALTERNATE NO. 2 REHABILITATION WITH CIPP
█	ALTERNATE NO. 3 REHABILITATION WITH CIPP
█	ALTERNATE NO. 4 REHABILITATION WITH CIPP

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	APPROVED BY	BAS				
	ISSUE DATE	MAY 2018				
	PROJECT NUMBER	185416-04-001				



2018 SANITARY SEWER REHABILITATION	
TOWN OF MONON MONON, INDIANA	REHAB PLANS

SHEET NO. 04
TOTAL SHEETS 14

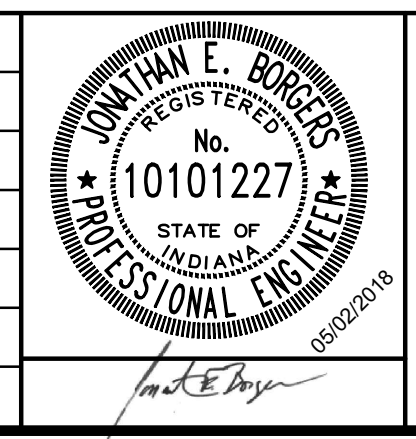


REHAB PLAN
SCALE: 1" = 50'

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LEGEND	
146A	MANHOLE NUMBER
Ⓢ	EXISTING MANHOLE
---	EXISTING SANITARY
---	EXISTING FORCEMAIN
Ⓢ	PROPOSED MANHOLE REHABILITATION
	BASE BID REHABILITATION WITH CIPP
	ALTERNATE NO. 1 REHABILITATION WITH CIPP
	ALTERNATE NO. 2 REHABILITATION WITH CIPP
	ALTERNATE NO. 3 REHABILITATION WITH CIPP
	ALTERNATE NO. 4 REHABILITATION WITH CIPP

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	ISSUE DATE	MAY 2018				
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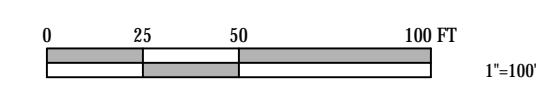


2018 SANITARY SEWER REHABILITATION	
TOWN OF MONON MONON, INDIANA	
REHAB PLANS	

SHEET NO.	05
TOTAL SHEETS	14



REHAB PLAN
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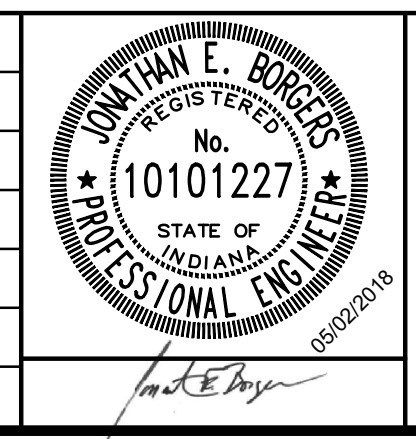


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LEGEND	
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---	EXISTING SANITARY
---	EXISTING FORCEMAIN
Ⓢ	PROPOSED MANHOLE REHABILITATION
—	BASE BID REHABILITATION WITH CIPP
—	ALTERNATE NO. 1 REHABILITATION WITH CIPP
—	ALTERNATE NO. 2 REHABILITATION WITH CIPP
—	ALTERNATE NO. 3 REHABILITATION WITH CIPP
—	ALTERNATE NO. 4 REHABILITATION WITH CIPP

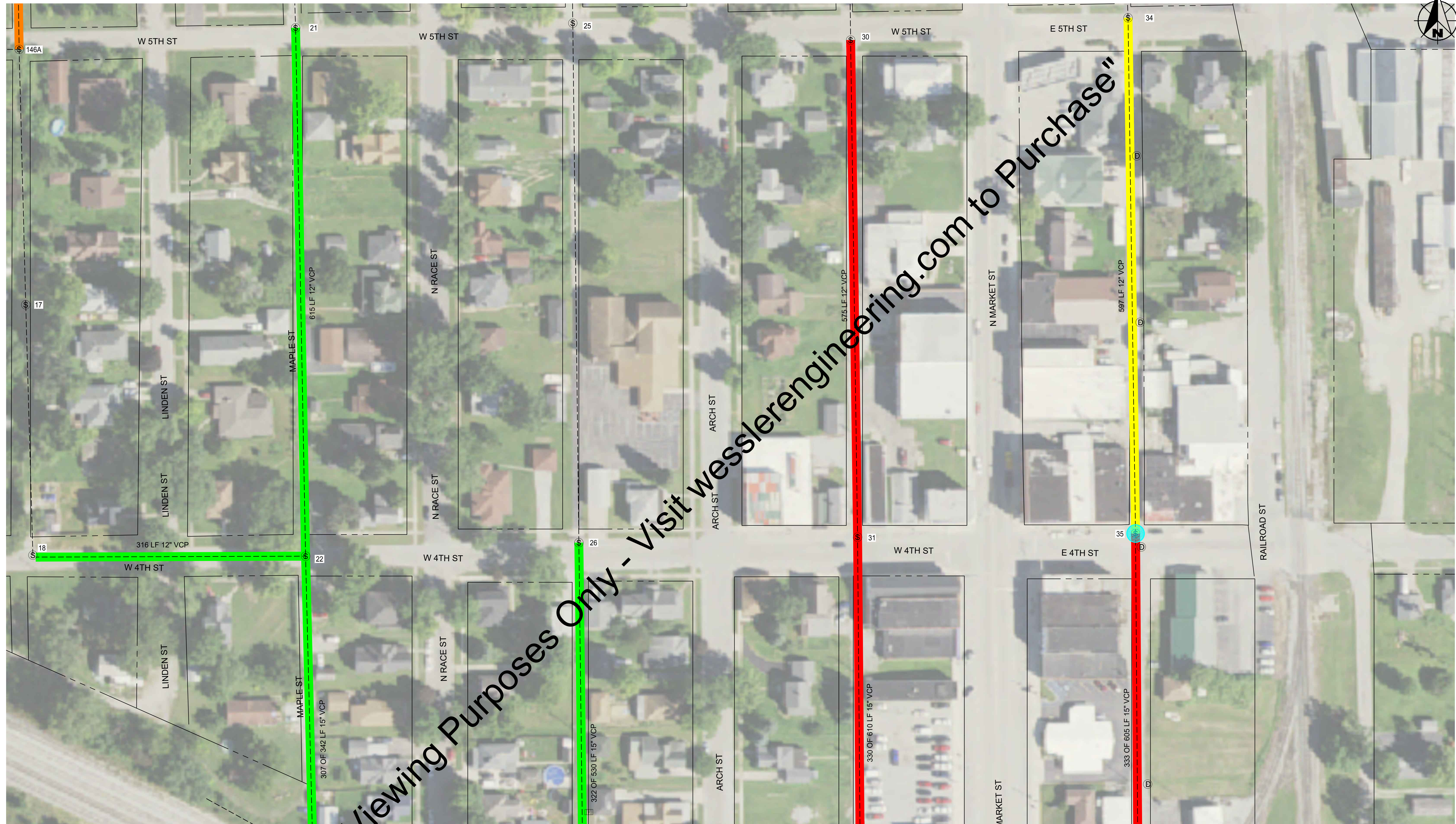
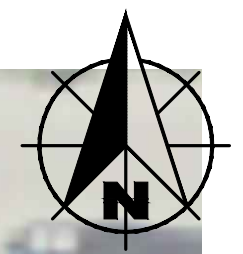
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APPROVED BY	BAS				
ISSUE DATE					
MAY 2018					
PROJECT NUMBER					
185416-04-001					



2018 SANITARY SEWER REHABILITATION	
TOWN OF MONON MONON, INDIANA	
REHAB PLANS	

SHEET NO.	06
TOTAL SHEETS	14



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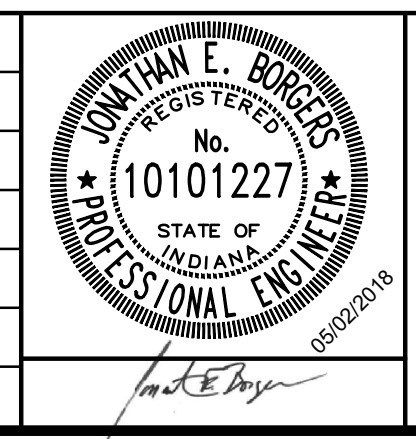
REHAB PLAN
SCALE: 1" = 50'



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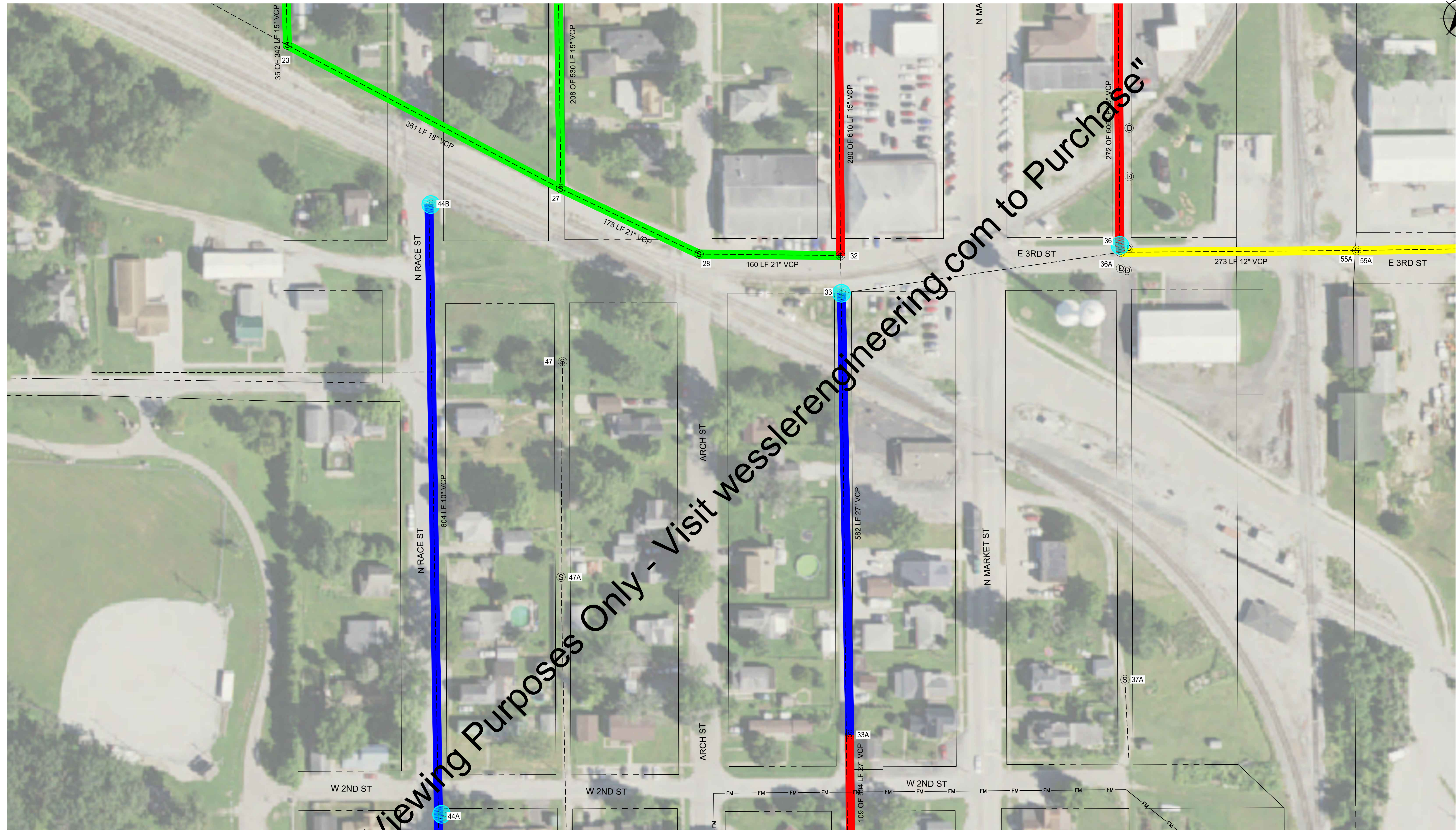
LEGEND	
146A	MANHOLE NUMBER
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---	EXISTING SANITARY
---	EXISTING FORCEMAIN
S	PROPOSED MANHOLE REHABILITATION
[Red Line]	BASE BID REHABILITATION WITH CIPP
[Blue Line]	ALTERNATE NO. 1 REHABILITATION WITH CIPP
[Orange Line]	ALTERNATE NO. 2 REHABILITATION WITH CIPP
[Green Line]	ALTERNATE NO. 3 REHABILITATION WITH CIPP
[Yellow Line]	ALTERNATE NO. 4 REHABILITATION WITH CIPP

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	APPROVED BY	BAS				
	ISSUE DATE	MAY 2018				
	PROJECT NUMBER	185416-04-001				



2018 SANITARY SEWER REHABILITATION
TOWN OF MONON MONON, INDIANA
REHAB PLANS

SHEET NO. 07
TOTAL SHEETS 14

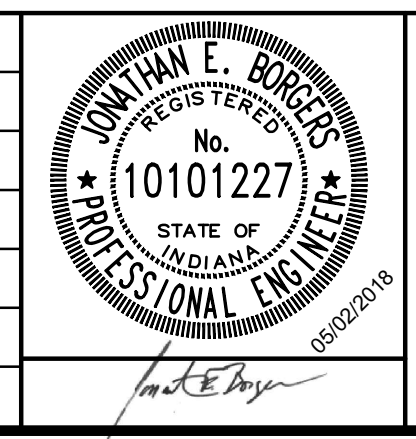


REHAB PLAN
SCALE: 1" = 50'
0 25 50 100 FT
1" = 100'

Drawing: \\mdwa.local\wessler\Clients\Monon\Projects\185416-Monon-WW-Utility-Improvement\CAD\01-001\DWG\Sheet\185416-PN.dwg | Layout: 05 | Plotter: 05/01/18 @ 01:16:17 | LastSavedBy: ChristinaB

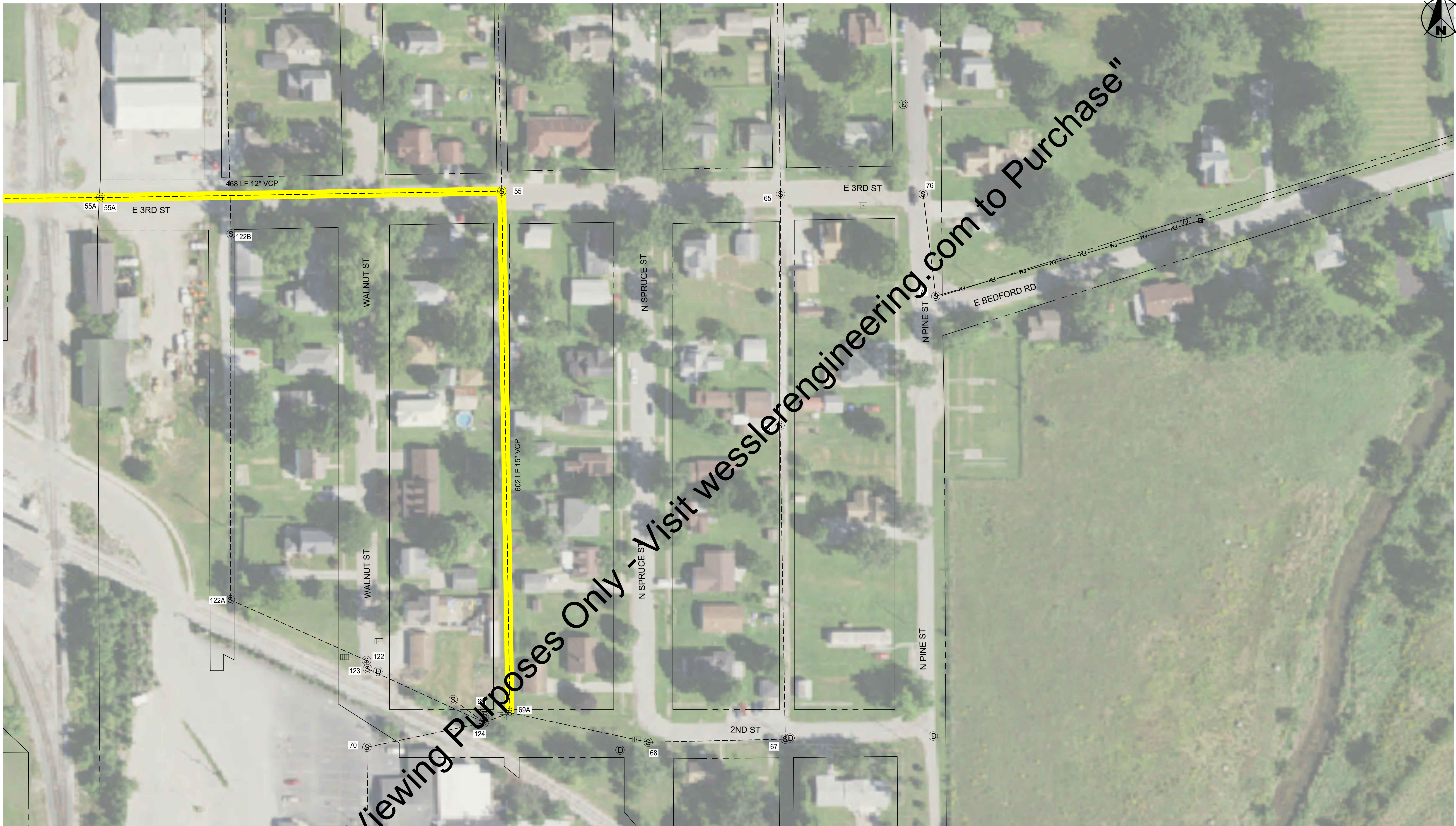
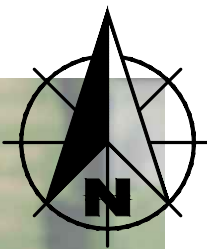
LEGEND	
146A	MANHOLE NUMBER
Ⓢ	EXISTING MANHOLE
---	EXISTING SANITARY
FM	EXISTING FORCEMAIN
Ⓢ	PROPOSED MANHOLE REHABILITATION
—	BASE BID REHABILITATION WITH CIPP
—	ALTERNATE NO. 1 REHABILITATION WITH CIPP
—	ALTERNATE NO. 2 REHABILITATION WITH CIPP
—	ALTERNATE NO. 3 REHABILITATION WITH CIPP
—	ALTERNATE NO. 4 REHABILITATION WITH CIPP

SCALE VERIFICATION	DRAWN BY	CAB	NO.	DATE	INITIALS	REVISION DESCRIPTIONS
BAR IS ONE INCH LONG ON ORIGINAL DRAWING	CHECKED BY	JKB				
	APPROVED BY	BAS				
	ISSUE DATE	MAY 2018				
	PROJECT NUMBER	185416-04-001				

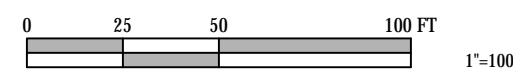


2018 SANITARY SEWER REHABILITATION	
TOWN OF MONON MONON, INDIANA	
REHAB PLANS	

SHEET NO.	08
TOTAL SHEETS	14



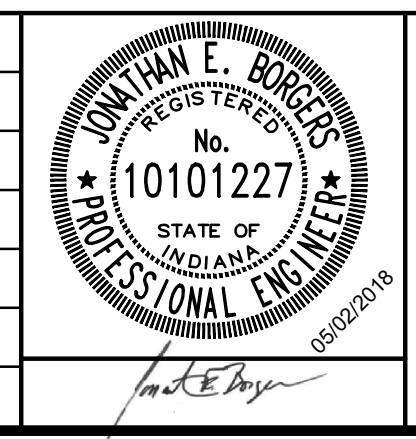
REHAB PLAN
SCALE: 1" = 50'



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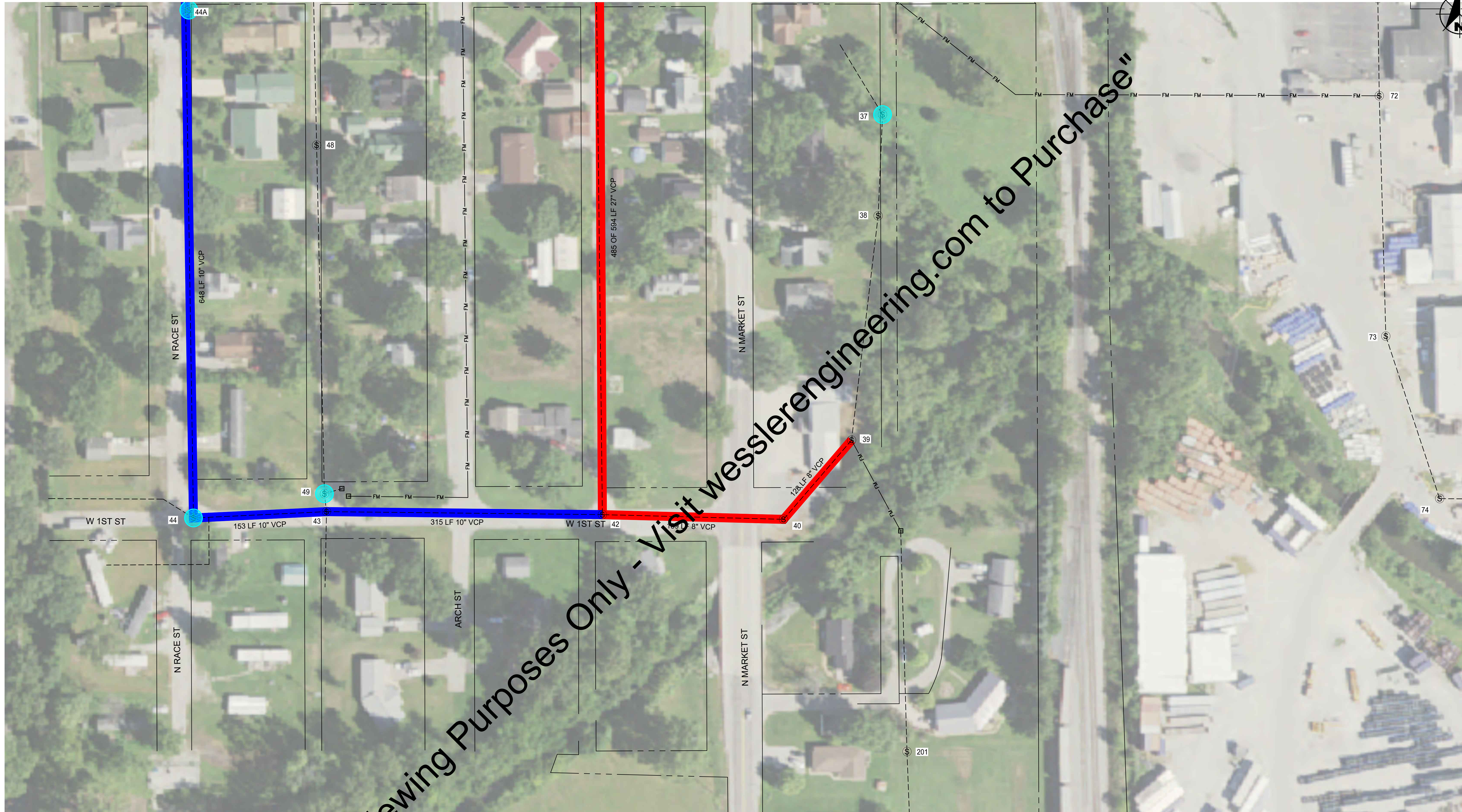
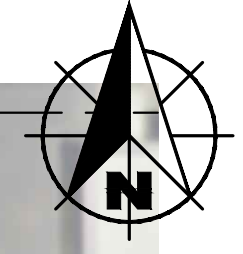
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146A	MANHOLE NUMBER
Ⓢ	EXISTING MANHOLE
---	EXISTING SANITARY
---	EXISTING FORCEMAIN
Ⓢ	PROPOSED MANHOLE REHABILITATION
—	BASE BID REHABILITATION WITH CIPP
—	ALTERNATE NO. 1 REHABILITATION WITH CIPP
—	ALTERNATE NO. 2 REHABILITATION WITH CIPP
—	ALTERNATE NO. 3 REHABILITATION WITH CIPP
- - -	ALTERNATE NO. 4 REHABILITATION WITH CIPP

SCALE VERIFICATION	DRAWN BY	CAB	NO.	DATE	INITIALS	REVISION DESCRIPTIONS
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	ISSUE DATE	MAY 2018				
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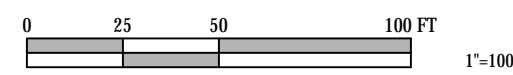
2018 SANITARY SEWER REHABILITATION	
TOWN OF MONON MONON, INDIANA	
REHAB PLANS	

SHEET NO.	09
TOTAL SHEETS	14



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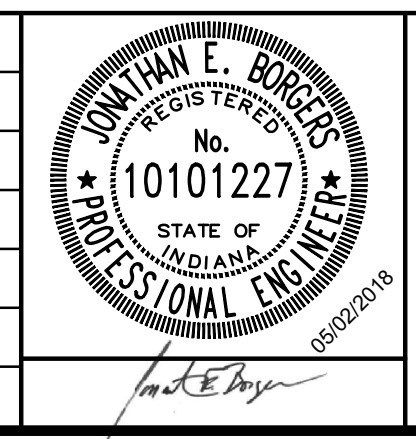
REHAB PLAN
SCALE: 1" = 50'



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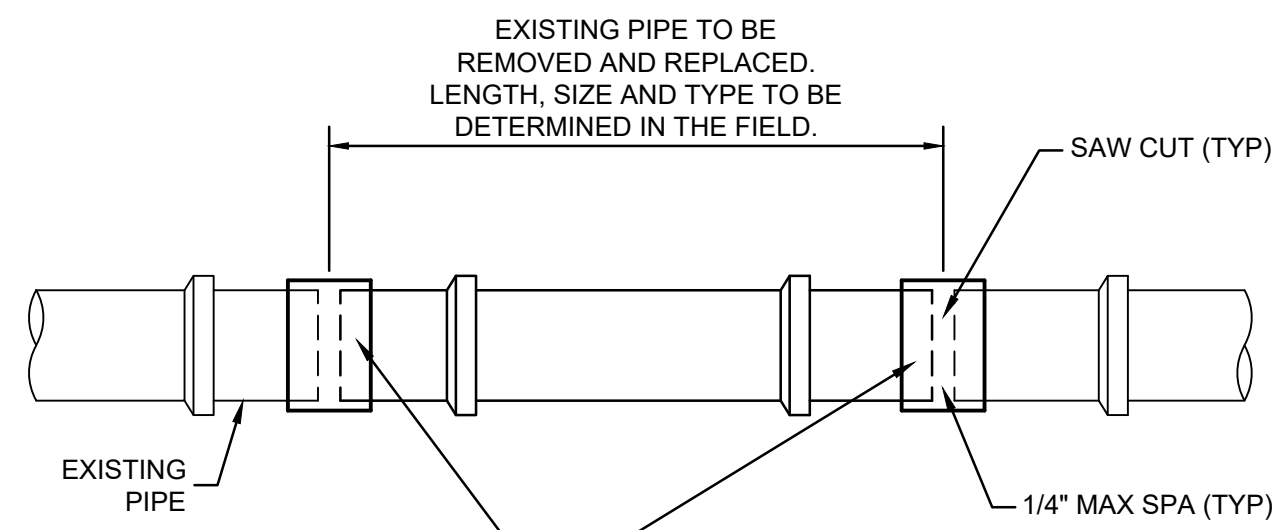
LEGEND	
146A	MANHOLE NUMBER
Ⓢ	EXISTING MANHOLE
---	EXISTING SANITARY
FM	EXISTING FORCEMAIN
Ⓢ	PROPOSED MANHOLE REHABILITATION
—	BASE BID REHABILITATION WITH CIPP
—	ALTERNATE NO. 1 REHABILITATION WITH CIPP
—	ALTERNATE NO. 2 REHABILITATION WITH CIPP
—	ALTERNATE NO. 3 REHABILITATION WITH CIPP
—	ALTERNATE NO. 4 REHABILITATION WITH CIPP

SCALE VERIFICATION	DRAWN BY	CAB	NO.	DATE	INITIALS	REVISION DESCRIPTIONS
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	ISSUE DATE	MAY 2018				
	PROJECT NUMBER	185416-04-001				

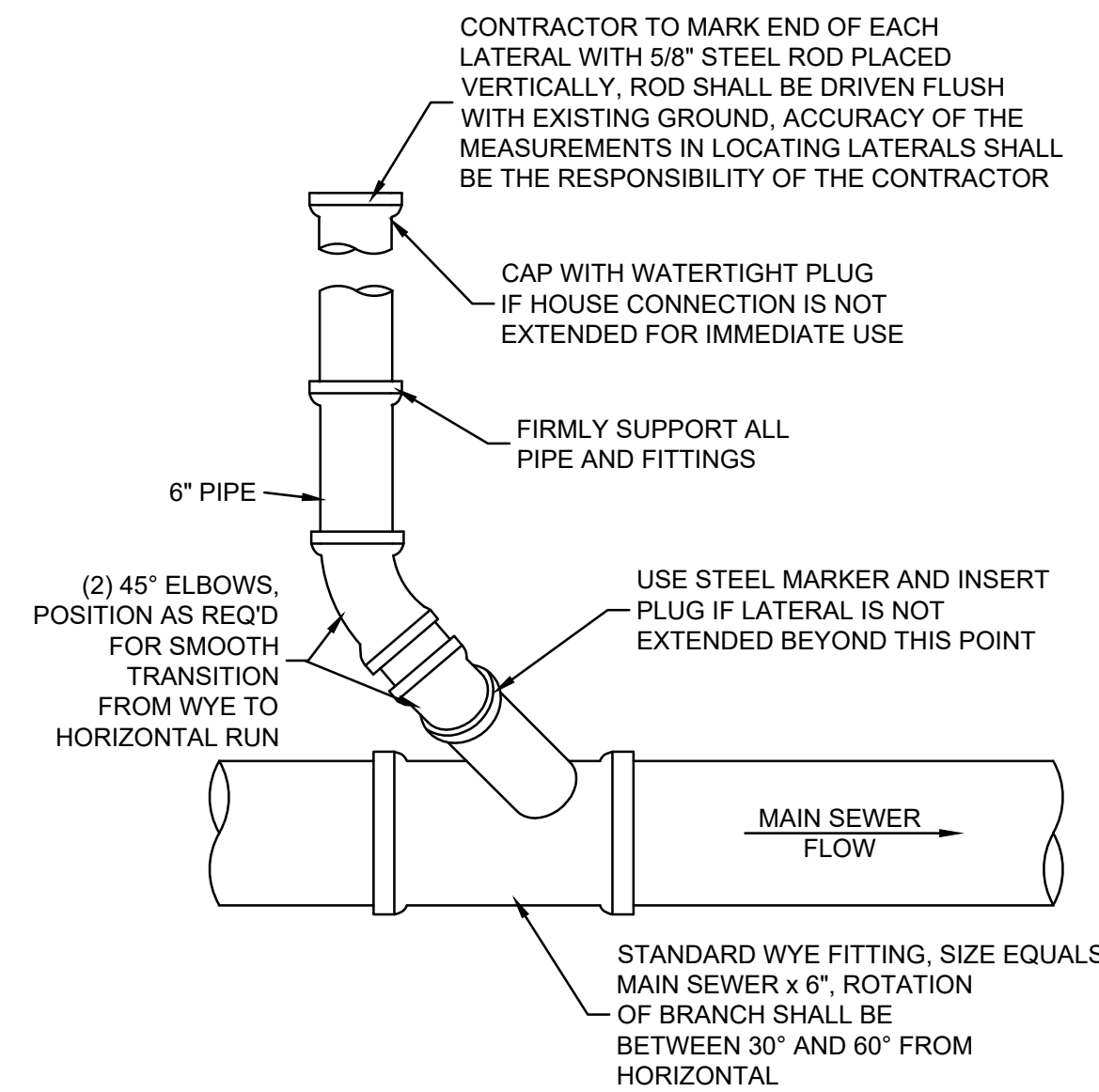


2018 SANITARY SEWER REHABILITATION	
TOWN OF MONON MONON, INDIANA	
REHAB PLANS	

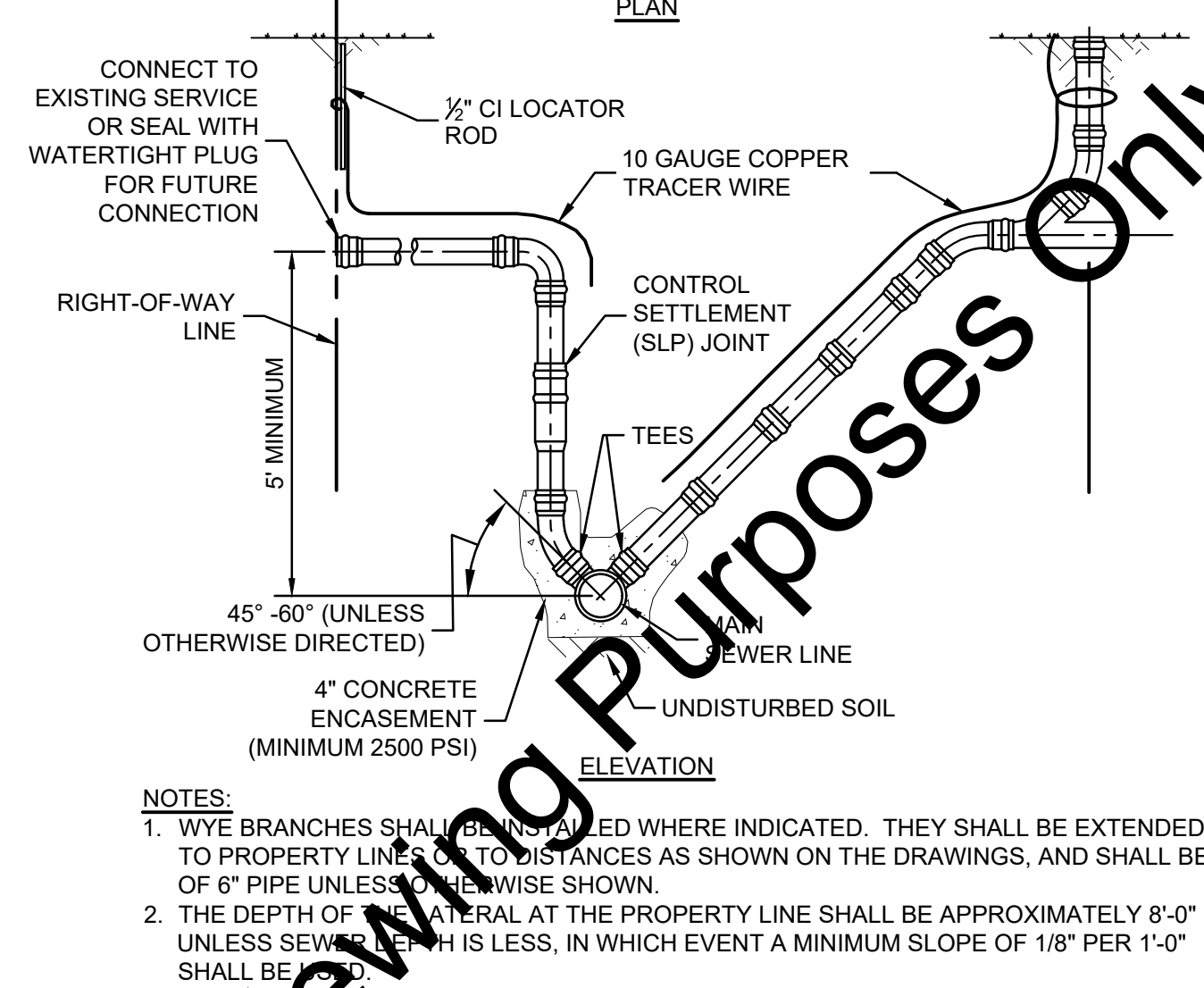
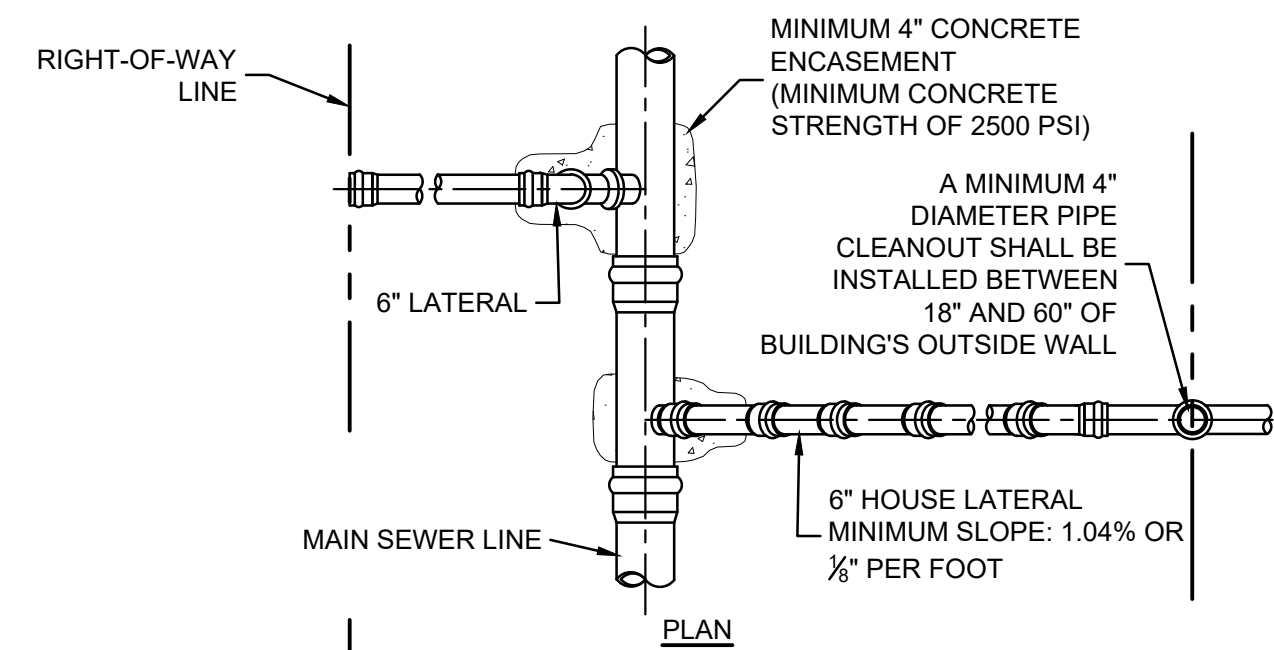
SHEET NO.	10
TOTAL SHEETS	14



SANITARY SEWER REPAIR
SCALE: NONE



SERVICE LATERAL CONNECTION
SCALE: NONE



**SANITARY LATERAL FOR DEEP SEWERS
(15' DEEP AND OVER)**
SCALE: NONE

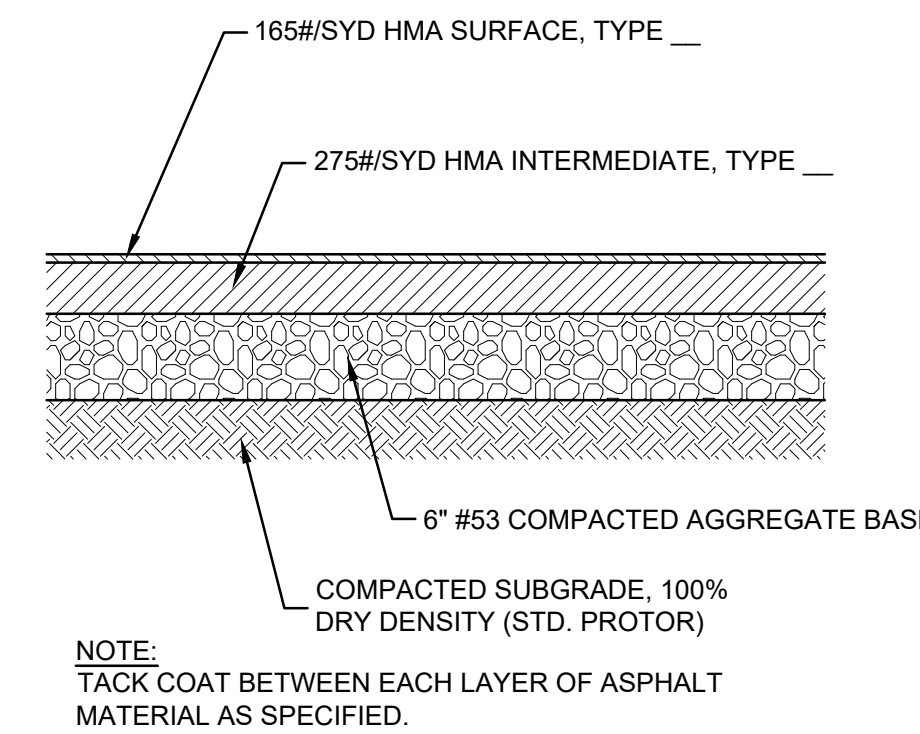
SPEED (MPH)	DISTANCE (FEET)				
	A	B	C	D	E
20 OR LESS	120	100	100	100	100
25	160	100	100	100	100
30	200	100	100	100	100
35	280	100	350	350	350
40	320	100	350	350	350
45	360	100	500	500	500
50	440	100	500	500	500
55	520	100	500	500	500
60	600	100	1,000	1,600	2,640
65	680	100	1,000	1,600	2,640
70	760	100	1,000	1,600	2,640

NOTES:
1. DISTANCES SHOWN ARE APPROXIMATE. ADJUST SIGN FOR CURVES, HILLS, INTERSECTIONS, DRIVEWAYS, ETC TO IMPROVE SIGN VISIBILITY.
2. THE SPACING OF CHANNELIZING DEVICES SHOULD BE A DISTANCE IN FEET EQUAL TO THE SPEED LIMIT IN MPH WHEN USED FOR TAPER CHANNELIZATION, AND A DISTANCE IN FEET EQUAL TO TWO TIMES THE SPEED LIMIT IN MPH USED FOR TANGENT CHANNELIZATION.

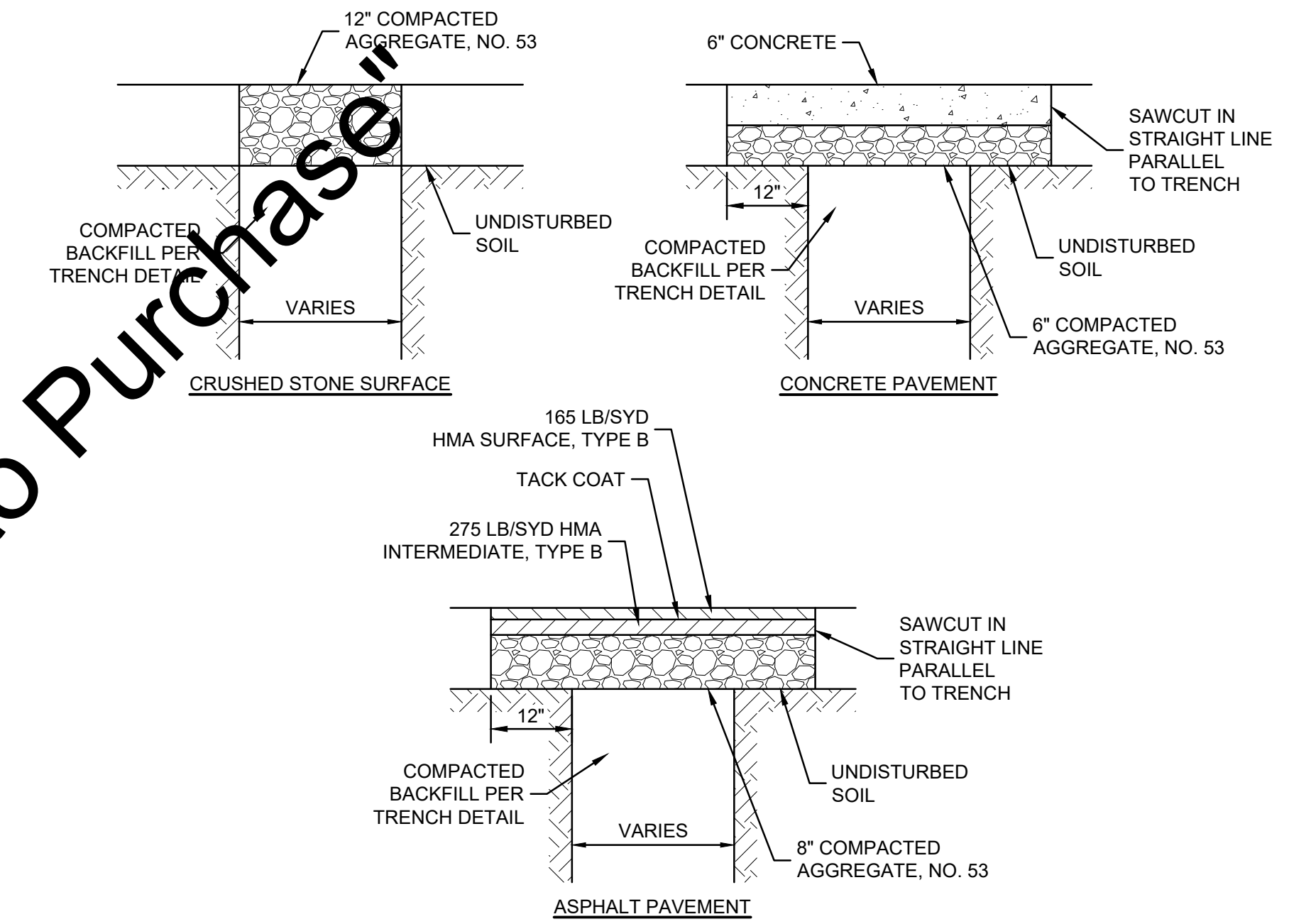
ADVANCE WARNING SIGN AND FLAGGER OPERATION SPACING
SCALE: NONE

- ⊠ WORK AREA
- ⊠ TYPE II CONSTRUCTION WARNING LIGHT
- ⊠ TYPE II ADDED PENALTY (G20-7) ONLY FOR INDOT ROADS
- ⊠ "ROAD WORK AHEAD" (W20-1) OR "UTILITY WORK AHEAD" (W21-7)
- ⊠ "ROAD WORK - XXX FT" (W20-1)
- ⊠ "ONE LANE ROAD AHEAD" (W20-4)
- ⊠ FLAGGER SIGN (W20-7)
- ⊠ "END ROAD WORK" (G20-2)
- ⊠ BARRICADE TYPE IIIB
- TRAFFIC CONTROL DRUM
- TRAFFIC FLOW DIRECTION
- ⊠ FLAGGER
- ↑ SIGN, FACING LEFT
- ↓ SIGN, FACING RIGHT

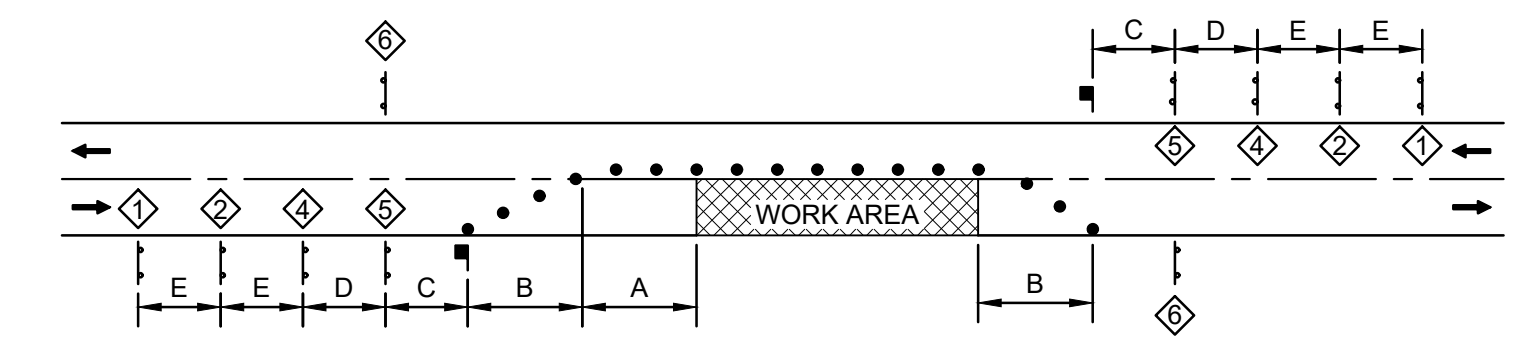
TRAFFIC CONTROL LEGEND
SCALE: NONE



ASPHALT PAVEMENT SECTION
SCALE: NONE




PAVEMENT REPAIR
SCALE: NONE

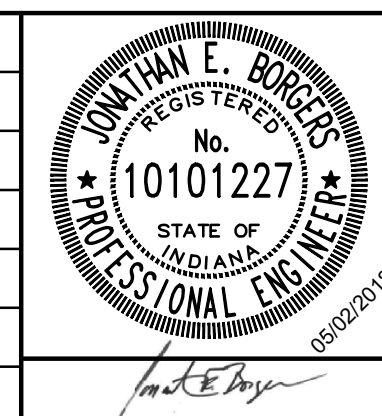


TEMPORARY FLAGGER OPERATION
SCALE: NONE

TRAFFIC CONTROL NOTES:
1. PROVIDE SIGNS AND PLACEMENT OF SIGNS IN COMPLIANCE WITH THE IMUTCD (LATEST EDITION) AND THE CURRENT INDOT STANDARDS.
2. WHEN ADDITIONAL WORKING SPACE IS NEEDED, UTILIZE THE FLAGGER OPERATION TO MAINTAIN ONE TRAVEL LANE.
3. COVER SIGNS 4 AND 5 WHEN WORK IS NOT IN PROGRESS.
4. BACKFILL EXCAVATIONS IN THE PAVEMENT AREAS DAILY UNTIL PAVEMENT IS REPLACED.
5. DURING CONSTRUCTION MINIMIZE DAMAGE TO THE EXISTING PAVEMENT, DRIVES, AND CURBS.
6. IF A ROAD CLOSURE IS NEEDED, SUBMIT A DETAILED DETOUR ROUTE PLAN AND TIMELINE FOR APPROVAL 2 WEEKS PRIOR TO ANY CLOSURES.
7. PROTECTION OF AND ACCESS FOR PEDESTRIANS MUST BE MAINTAINED DURING CONSTRUCTION.
8. COORDINATE CLOSURES WITH ALL EMERGENCY AGENCIES AND SCHOOL DISTRICTS.

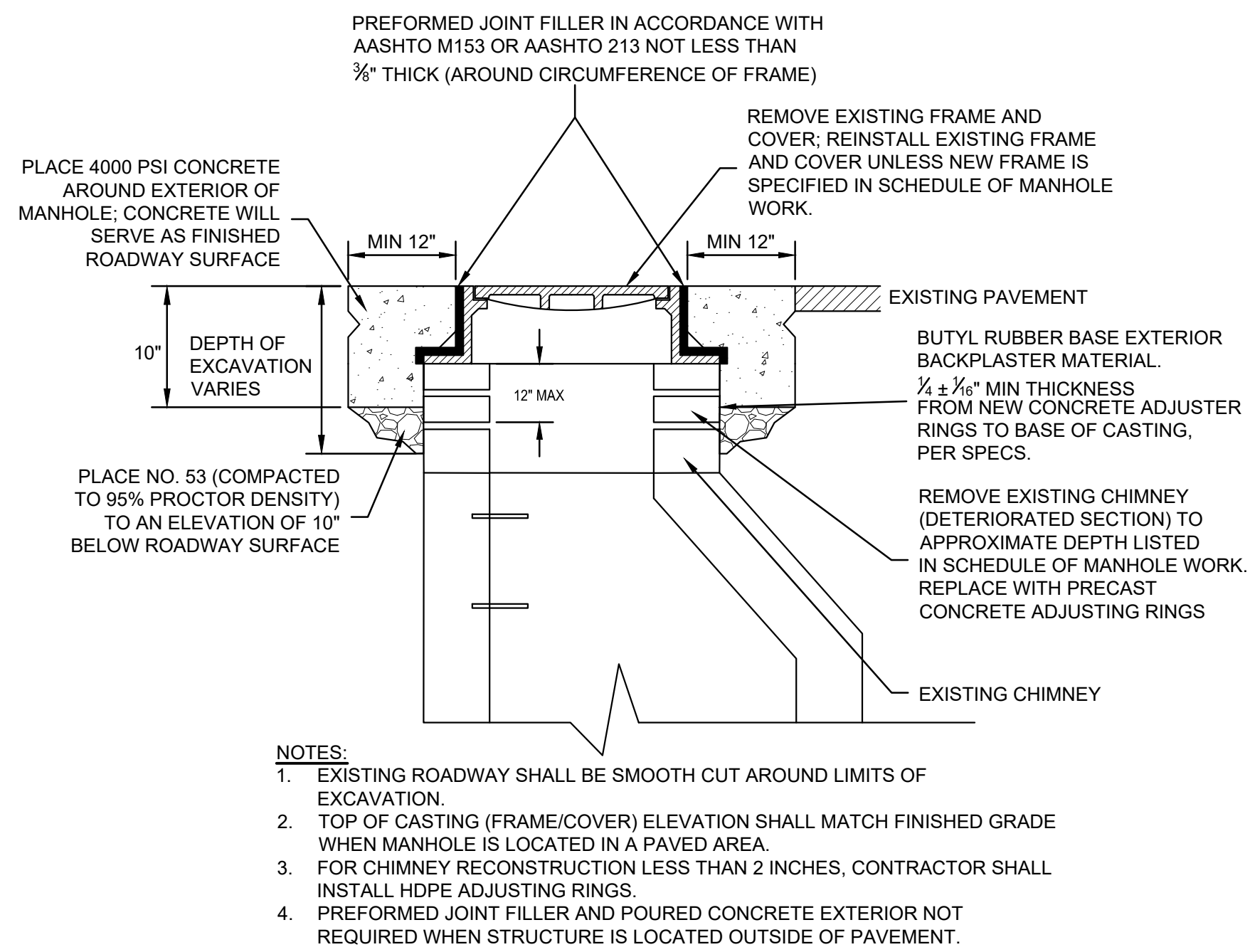
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	ISSUE DATE	MAY 2018				
	PROJECT NUMBER	185416-04-001				

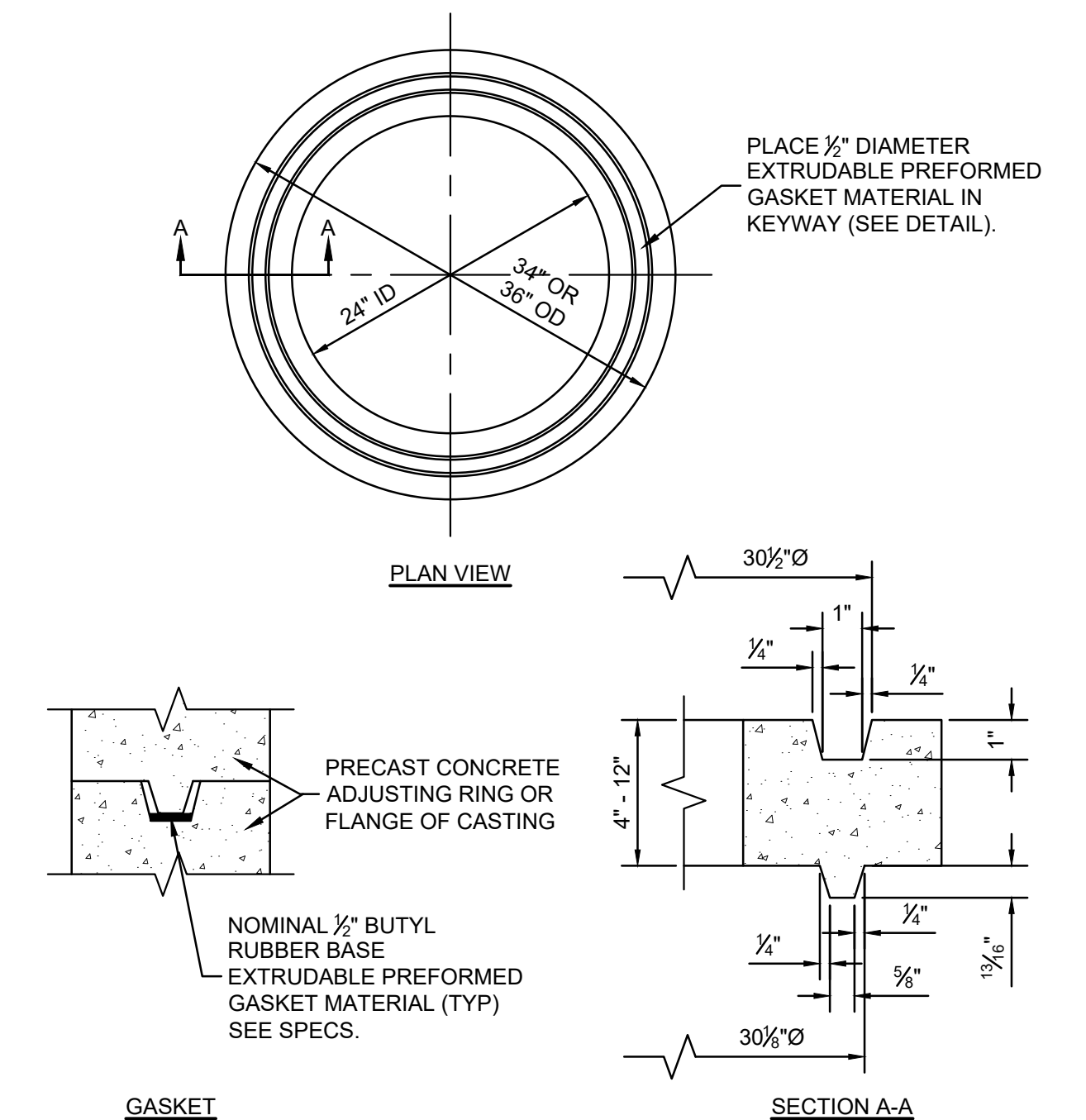
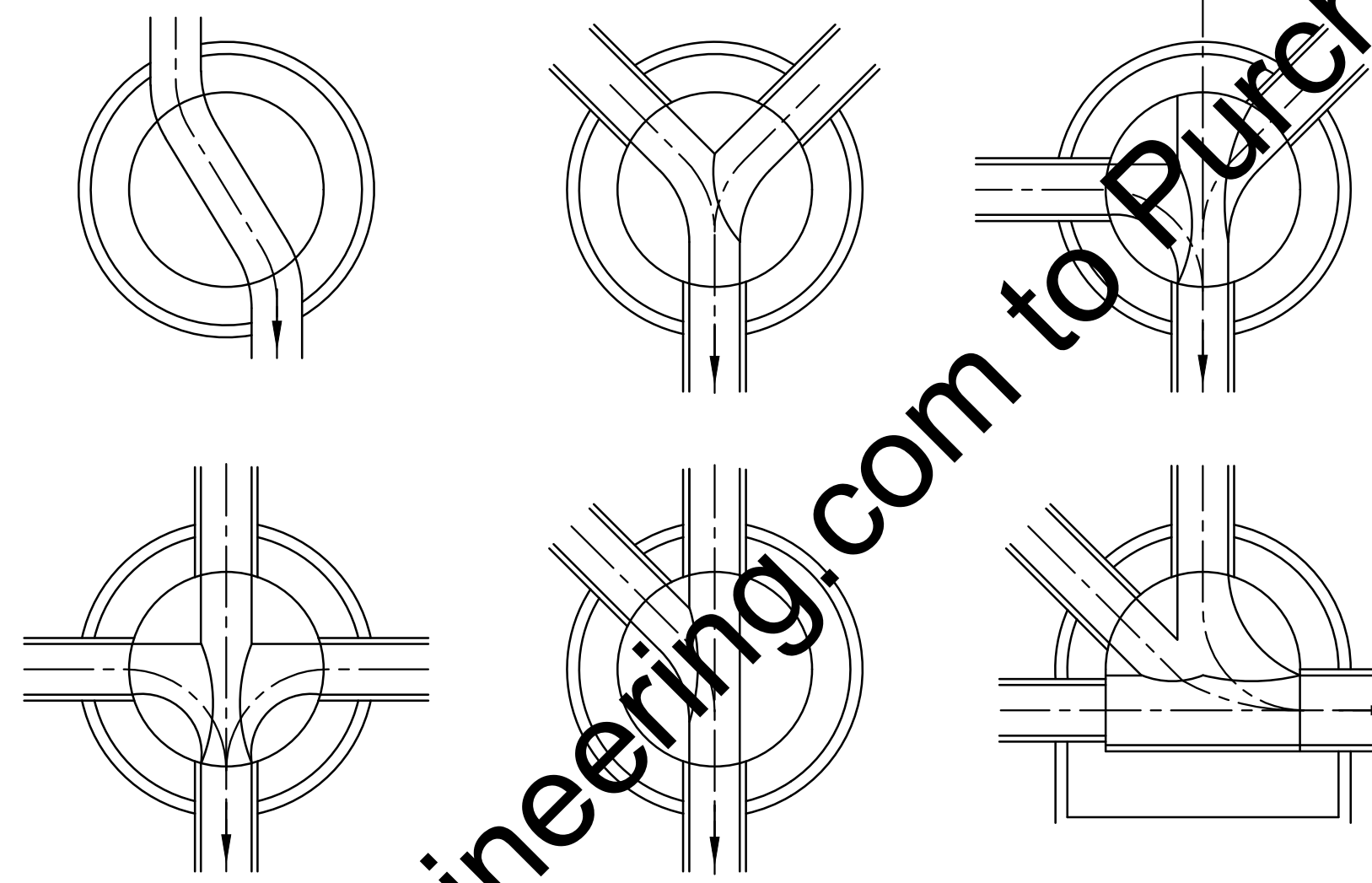


2018 SANITARY SEWER REHABILITATION
 TOWN OF MONON
 MONON, INDIANA
 MISCELLANEOUS DETAILS

SHEET NO.	11
TOTAL SHEETS	14

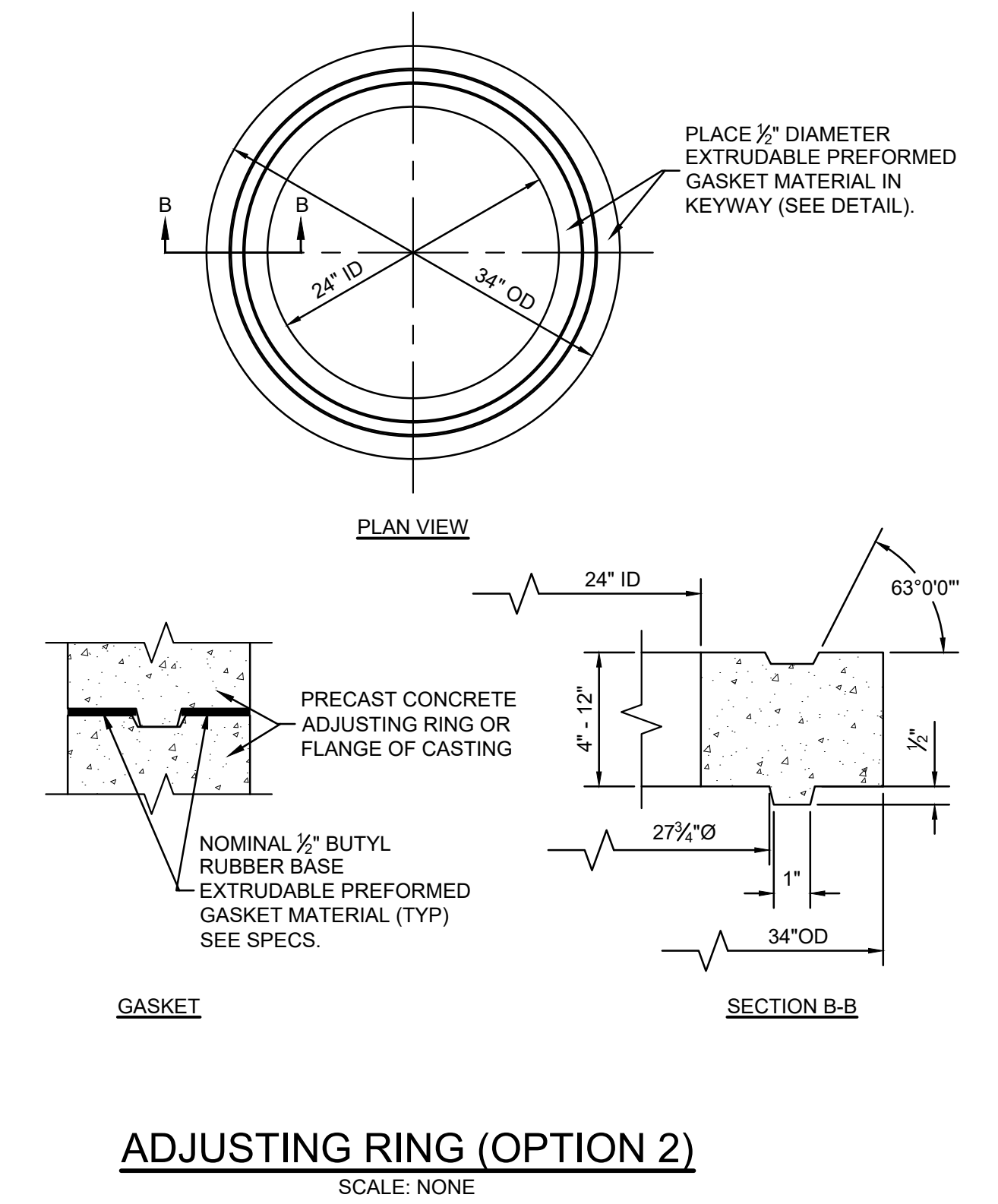
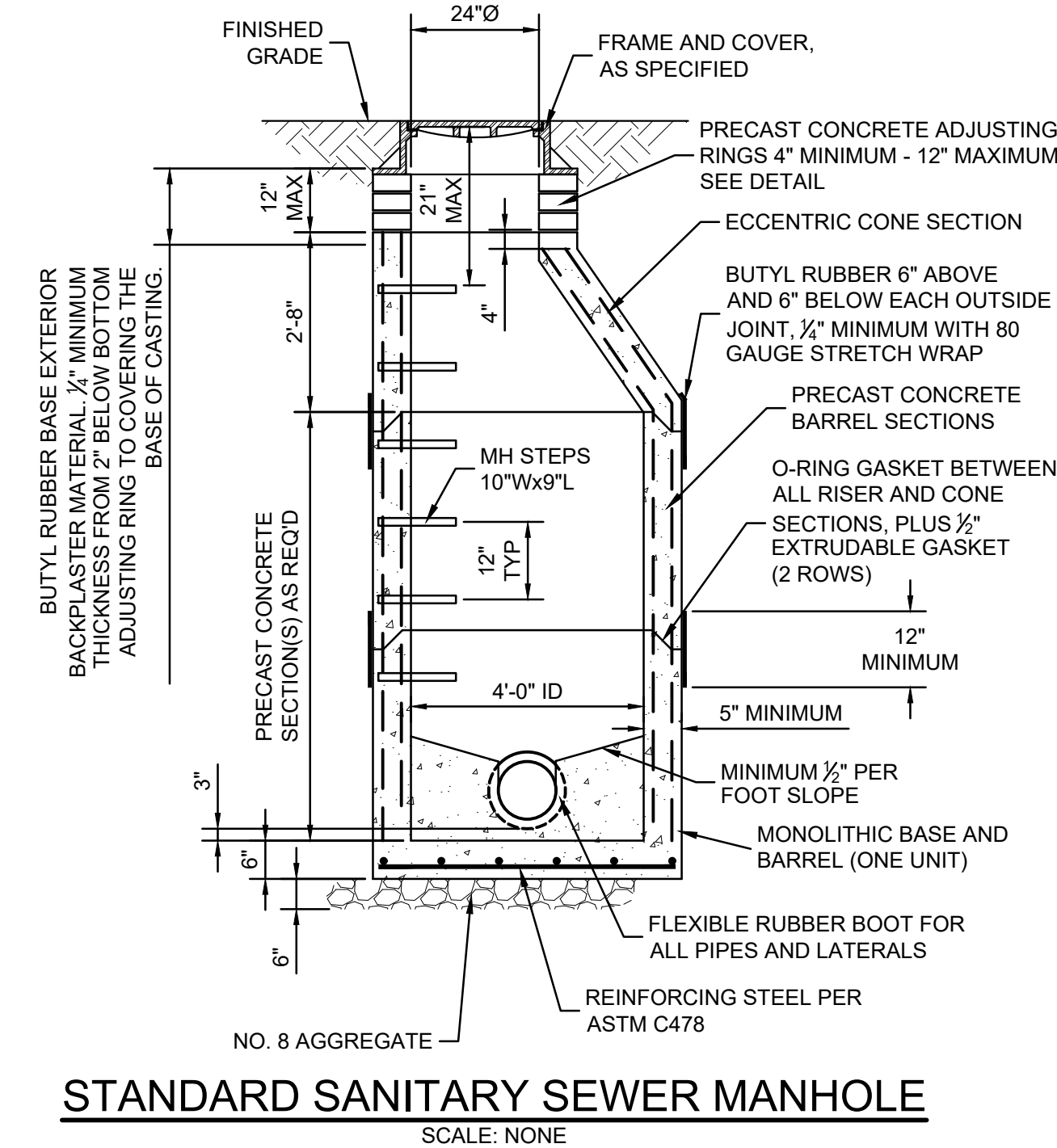
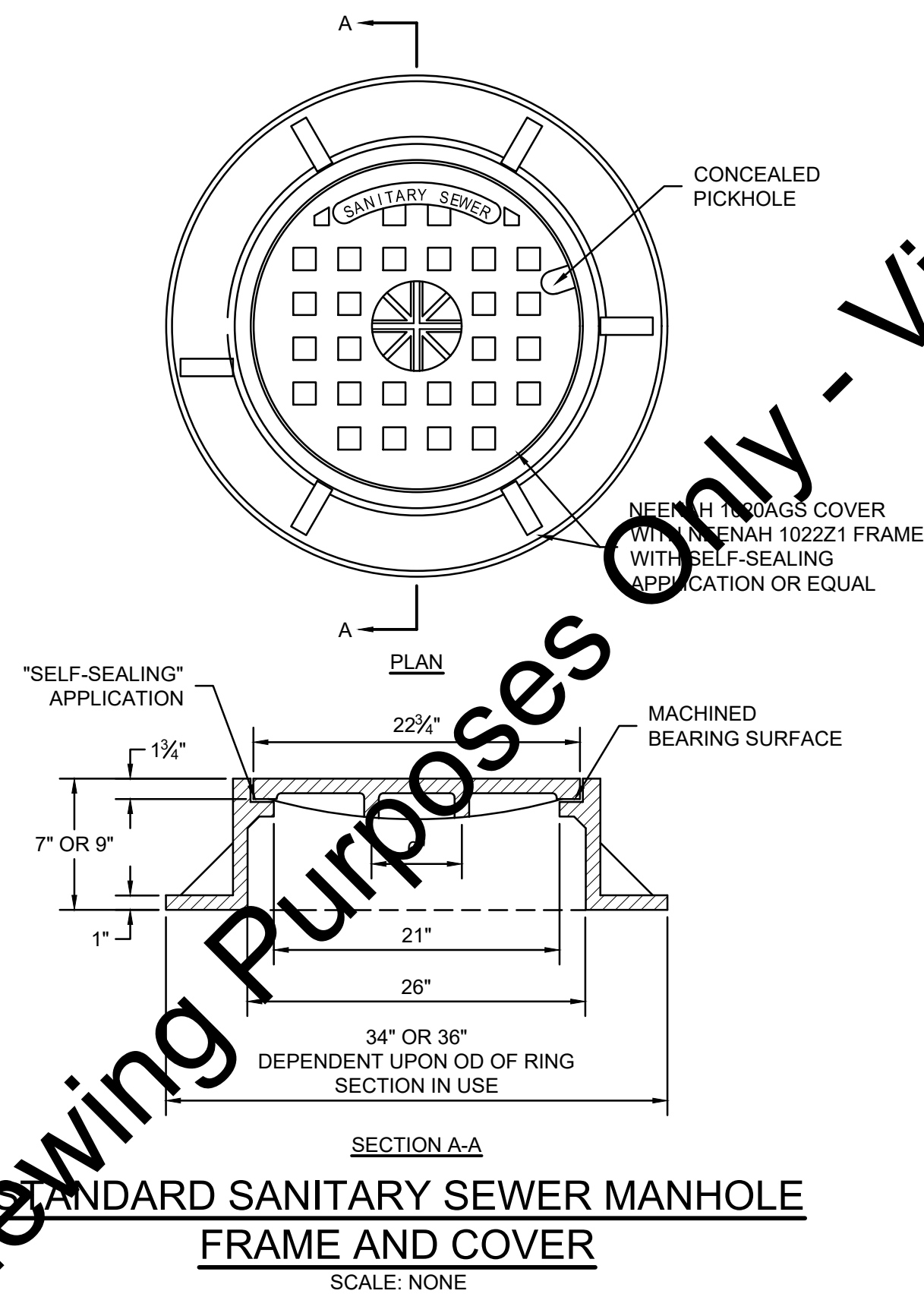
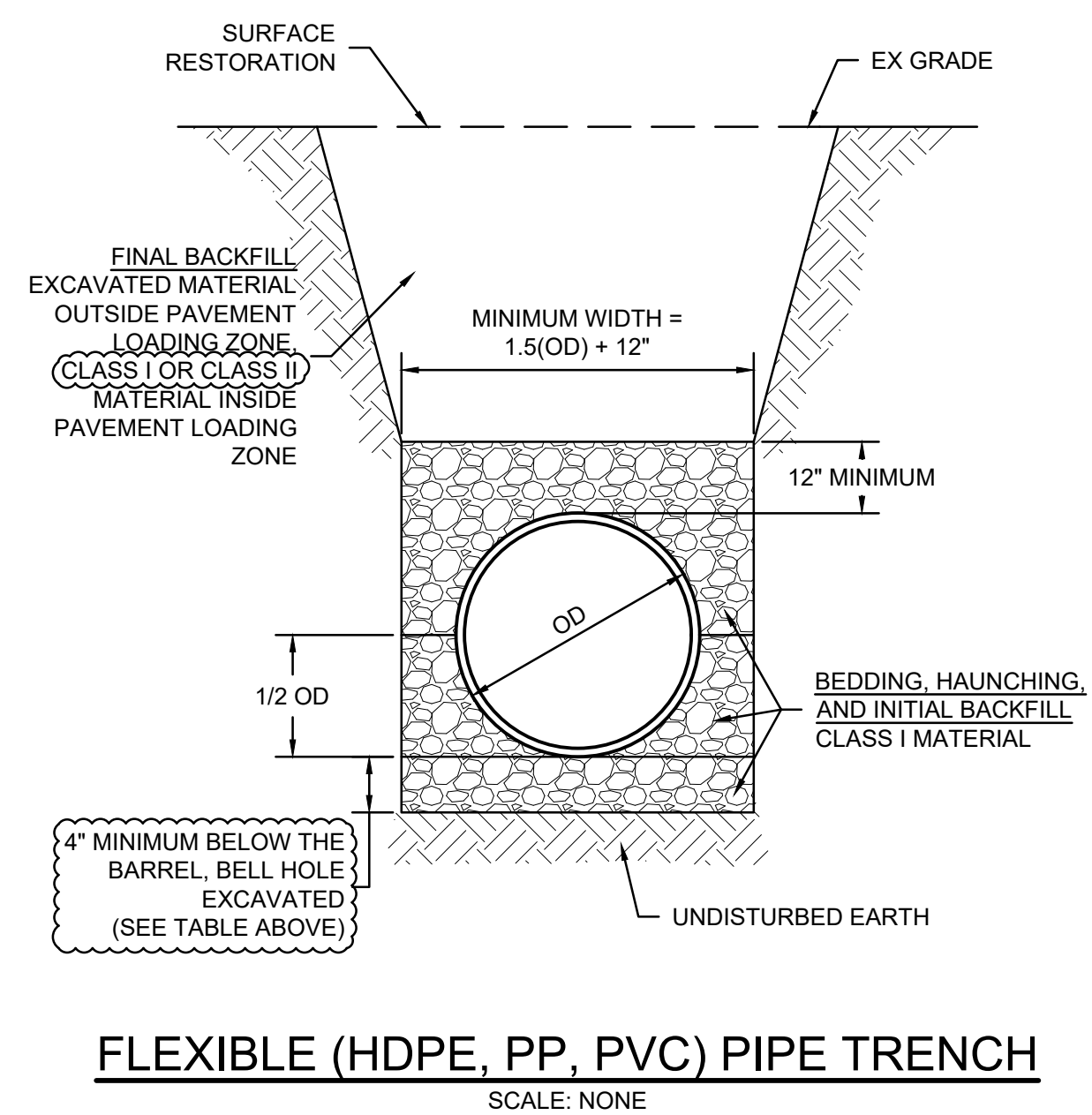


CHIMNEY RECONSTRUCTION/FRAME AND COVER RESET OR REPLACEMENT
SCALE: NONE



ADJUSTING RING (OPTION 1)
SCALE: NONE

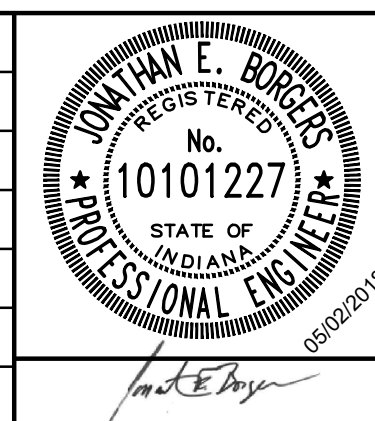
PIPE SIZE	8" TO 16"	18" TO 30"	33" AND OVER
BEDDING BELOW THE PIPE BARREL	4"	OD / 4	8"



ADJUSTING RING (OPTION 2)
SCALE: NONE

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	APPROVED BY	BAS				
	ISSUE DATE	MAY 2018				
	PROJECT NUMBER	185416-04-001				



2018 SANITARY SEWER REHABILITATION

TOWN OF MONON
MONON, INDIANA

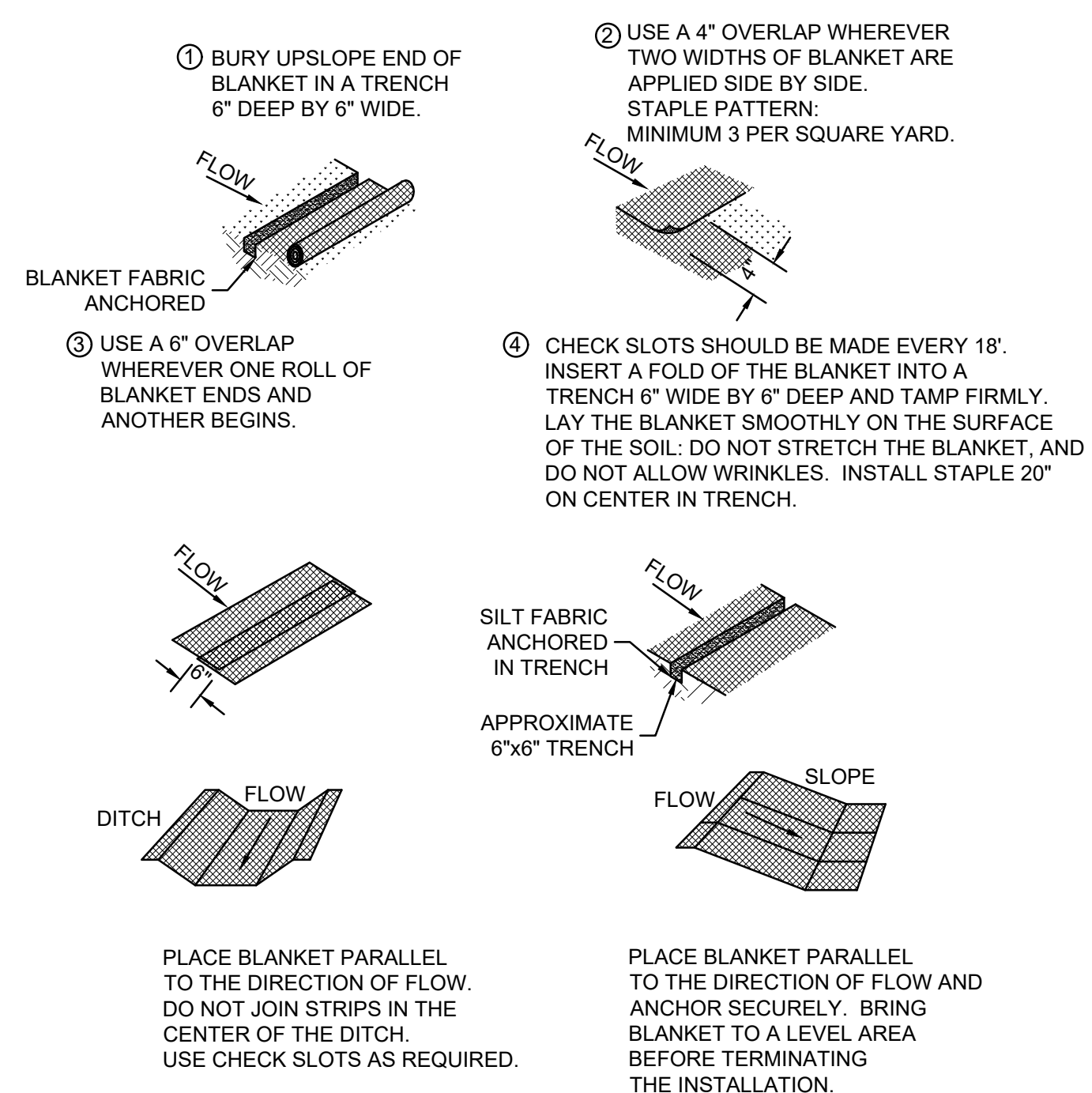
MISCELLANEOUS DETAILS

SHEET NO.

12

TOTAL SHEETS

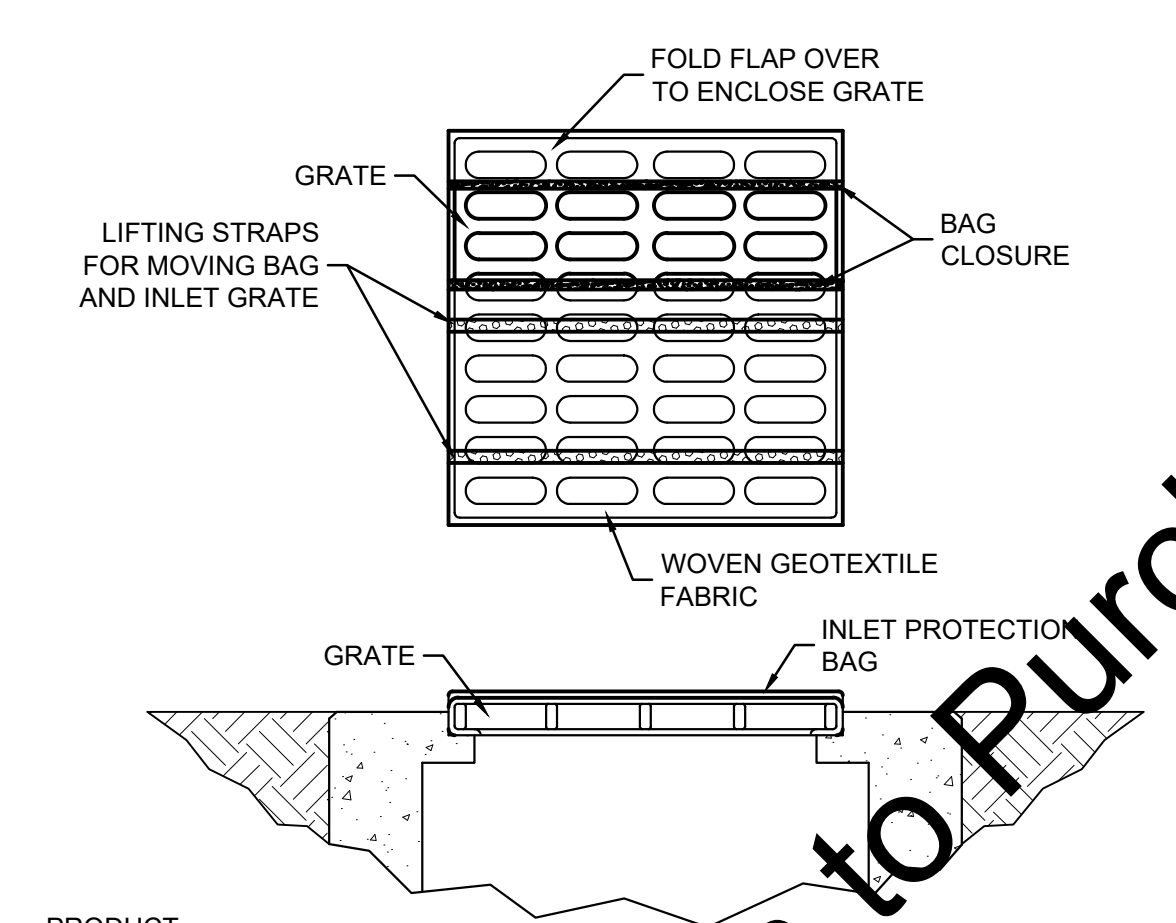
14



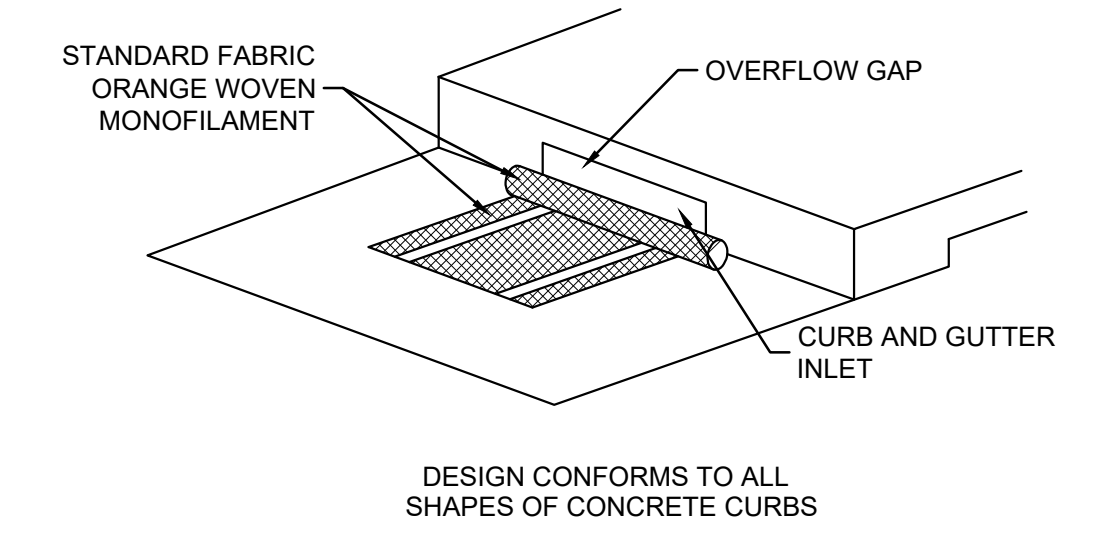
- PRODUCT:**
1. NORTH AMERICAN GREEN SC150, OR EQUAL.
- NOTES:**
1. PROTECT THE SLOPES WITH AN EROSION CONTROL BLANKET WHERE CONSTRUCTION DISTURBS SLOPES EQUAL OR STEEPER THAN 3:1.
- MAINTENANCE:**
1. INSPECT FOR EROSION AFTER EACH STORM EVENT DURING VEGETATION ESTABLISHMENT, AND AT LEAST ONCE EVERY 7 CALENDAR DAYS.
2. IF ANY AREAS SHOW EROSION, PULL BACK THAT PORTION OF THE BLANKET, ADD SOIL, RESEED, RELAY AND STAPLE THE BLANKET.
3. CHECK AREAS PERIODICALLY AFTER VEGETATION ESTABLISHMENT.

EROSION CONTROL BLANKET
SCALE: NONE

CONSTRUCTION ACTIVITY	SCHEDULE CONSIDERATION
NOTIFY IDEM RULE 5 COORDINATOR (317-233-1864) AND THE STORMWATER AUTHORITY WITHIN 48 HOURS PRIOR TO STARTING CONSTRUCTION. POST THE CONTACT INFORMATION AT THE CONSTRUCTION ENTRANCE. INCLUDE A COPY OF THE NOTICE OF INTENT (NOI) AND THE ONSITE PERSON WHO IS RESPONSIBLE FOR IMPLEMENTING THE STORM WATER POLLUTION PREVENTION PLAN (SWPPP). THE SWPPP SHOULD BE ONSITE AND WEEKLY SITE INSPECTION REPORTS MUST BE AVAILABLE WITHIN 48 HOURS OF REQUEST.	WITHIN 48 HOURS PRIOR TO STARTING CONSTRUCTION.
CONSTRUCTION ACCESS - ENTRANCE TO SITE, CONSTRUCTION ROUTES, AREAS DESIGNATED FOR EQUIPMENT PARKING OR MATERIAL STAGING.	THIS IS THE FIRST LAND-DISTURBING ACTIVITY. AS SOON AS CONSTRUCTION BEGINS, STABILIZE ANY BARE AREAS WITH AGGREGATE AND TEMPORARY VEGETATION.
SEDIMENT TRAPS AND BARRIERS - BASIN TRAPS, SILT FENCE.	AFTER CONSTRUCTION IS ACCESSED, BASINS SHALL BE INSTALLED, WITH THE ADDITION OF MORE TRAPS AND BARRIERS AS NEEDED DURING GRADING.
RUNOFF CONTROL - DIVERSIONS, PERIMETER PROTECTION, CHECK DAMS, OUTLET PROTECTION.	RUNOFF CONTROL PRACTICES SHALL BE INSTALLED AFTER THE INSTALLATION OF SEDIMENT TRAPS AND BEFORE LAND GRADING. ADDITIONAL RUNOFF CONTROL MEASURES MAY BE INSTALLED DURING GRADING.
RUNOFF CONVEYANCE SYSTEM - STABILIZE STREAM BANKS, STORM DRAINS, CHANNELS, INLET AND OUTLET PROTECTION, SLOPE DRAINS.	AS NECESSARY, STABILIZE STREAM BANKS AND SIDE SLOPES OF RUNOFF SYSTEMS AS SOON AS POSSIBLE. USE EROSION CONTROL BLANKETS OR SLOPE DRAINS TO PREVENT EROSION. INSTALL INLET PROTECTION TO PREVENT SEDIMENTS FROM ENTERING STORM DRAINAGE SYSTEMS. PROTECT STORM OUTLETS TO PREVENT EROSION.
LAND CLEARING AND GRADING - SITE PREPARATION (CUTTING, FILLING, AND GRADING, SEDIMENT TRAPS, BARRIERS, DIVERSIONS, DRAINS, SURFACE ROUGHENING).	IMPLEMENT CLEARING AND GRADING AFTER INSTALLATION OF SEDIMENT TRAPS AND RUNOFF CONTROL MEASURES, AND INSTALL ADDITIONAL CONTROL MEASURES AS GRADING CONTINUES. CLEAR BORROW AND DISPOSAL AREAS AS NEEDED, AND MARK TREES AND BUFFER AREAS FOR PRESERVATION.
SURFACE STABILIZATION - TEMPORARY AND PERMANENT SEEDING, MULCHING, SODDING, RIPRAP, EROSION CONTROL BLANKET.	APPLY TEMPORARY OR PERMANENT STABILIZING MEASURES IMMEDIATELY TO ANY DISTURBED AREAS WHERE WORK HAS BEEN EITHER COMPLETED OR DELAYED.
CONSTRUCTION - STRUCTURES, UTILITIES, PAVING.	DURING CONSTRUCTION, INSTALL ANY EROSION AND SEDIMENTATION CONTROL MEASURES THAT ARE NEEDED.
LANDSCAPING AND FINAL STABILIZATION - TOPSOILING, TREES AND SHRUBS, PERMANENT SEEDING, MULCHING, SODDING, RIPRAP.	THIS IS THE LAST CONSTRUCTION PHASE. STABILIZE ALL DISTURBED AREAS, INCLUDING BORROW AND SPOIL AREAS, AND REMOVE ALL TEMPORARY CONTROL MEASURES. A UNIFORM DENSITY OF 70% VEGETATED COVER IS REQUIRED.

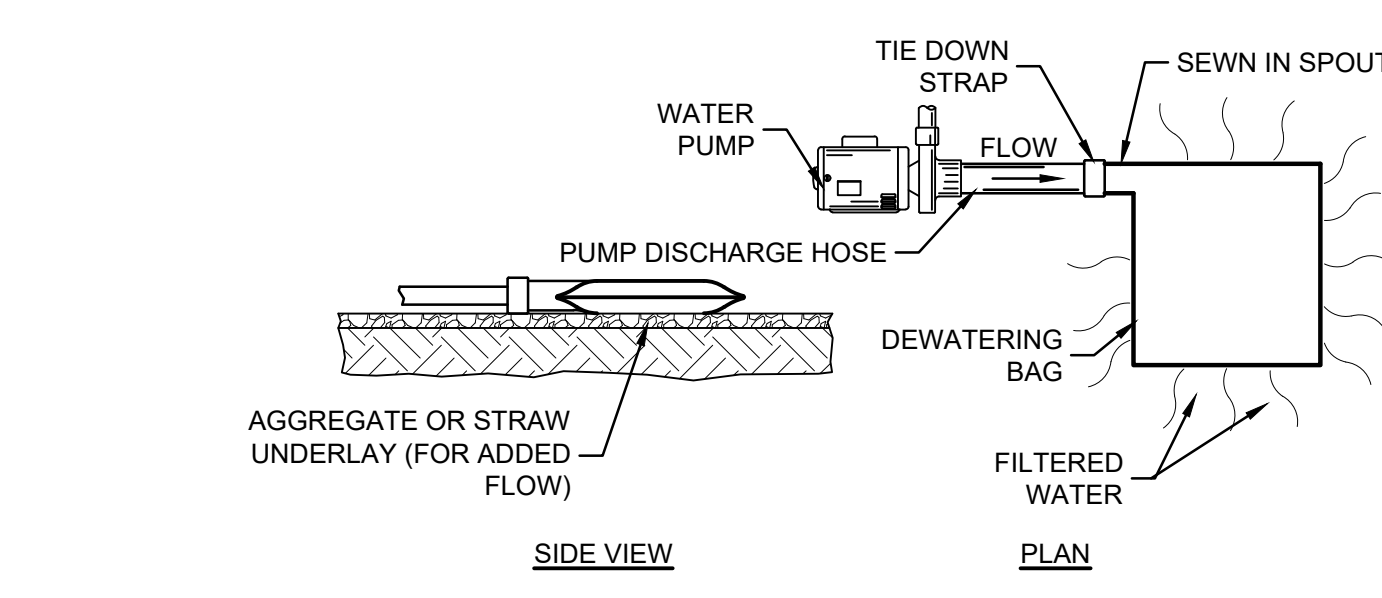


- PRODUCT:**
1. DANDY BAG, OR APPROVED EQUAL.
- INSTALLATION:**
1. THE EMPTY INLET PROTECTION BAG SHOULD BE PLACED OVER THE GRATE AS THE GRATE STANDS ON END.
2. TUCK THE ENCLOSURE FLAP INSIDE TO COMPLETELY ENCLOSE THE GRATE.
3. HOLDING THE LIFTING DEVICES (DO NOT RELY ON LIFTING DEVICES TO SUPPORT THE ENTIRE WEIGHT OF THE GRATE), PLACE THE GRATE INTO ITS FRAME.
- MAINTENANCE:**
1. REMOVE ALL ACCUMULATED SEDIMENT AND DEBRIS FROM SURFACE AND VICINITY OF UNIT AFTER EACH STORM EVENT.
2. REMOVE THE SEDIMENT THAT HAS ACCUMULATED WITHIN THE CONTAINMENT AREA OF THE INLET PROTECTION BAG AS NEEDED.
3. INSPECT WITHIN 24 HOURS OF A RAIN EVENT AND ONCE EVERY 7 CALENDAR DAYS.



- PRODUCT:**
1. DANDY CURB SACK, OR APPROVED EQUAL.
- INSTALLATION:**
1. REMOVE THE GRATE FROM THE CATCH BASIN AND STAND ON END.
2. CRADLE THE GRATE BETWEEN THE UPPER AND LOWER STRAPS.
3. INSERT THE GRATE INTO THE INLET WITH THE LIFTING DEVICES. LOWER BACK EDGE WITH TUBE INTO PLACE. TUBE SHOULD PARTIALLY BLOCK THE CURB HOOD OPENING.
- MAINTENANCE:**
1. REMOVE ALL ACCUMULATED SEDIMENT AND DEBRIS FROM SURFACE AND VICINITY OF UNIT AFTER EACH STORM EVENT.
2. REMOVE THE SEDIMENT THAT HAS ACCUMULATED WITHIN THE FABRIC AS NEEDED.
3. INSPECT WITHIN 24 HOURS OF A RAIN EVENT AND AT LEAST ONCE EVERY 7 CALENDAR DAYS.

CURB AND GUTTER INLET PROTECTION
SCALE: NONE

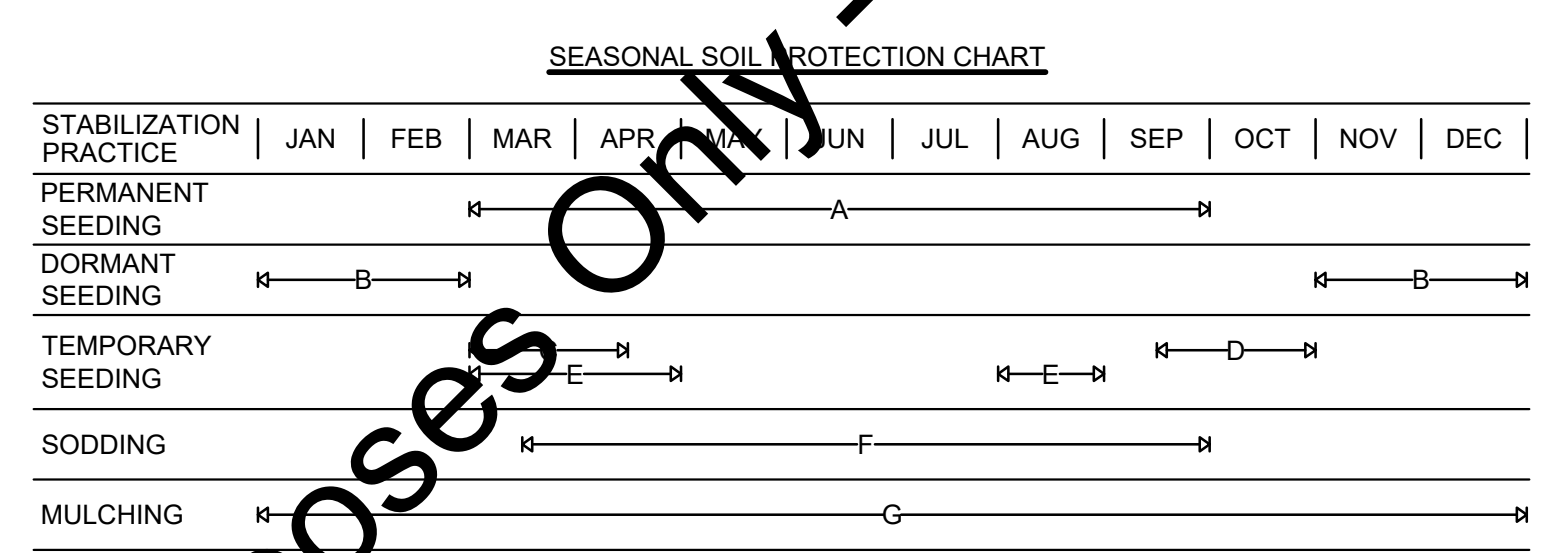


MECHANICAL PROPERTIES	TEST METHOD	UNITS	INDUSTRY STANDARD
GRAB TENSILE STRENGTH	ASTM D4632	kN (LB)	0.9 (205) X 0.9 (205)
GRAB TENSILE ELONGATION	ASTM D4632	%	50 X 50
PUNCTURE STRENGTH	ASTM D4833	kN (LB)	0.58 (130)
MULLEN BURST STRENGTH	ASTM D3786	kPa (PSI)	2618 (380)
TRAPEZOID TEAR STRENGTH	ASTM D4533	kN (LB)	0.36 (80) X 0.36 (80)
UV RESISTANCE	ASTM D4355	%	70
APPARENT OPENING SIZE	ASTM D4751	Mm (US STD SIEVE)	0.180 (80)
FLOW RATE	ASTM D4491	1/MIN/M ² (GAL/MIN/FT ²)	3866 (95)
PERMITTIVITY	ASTM D4491	S ⁻¹	1.2

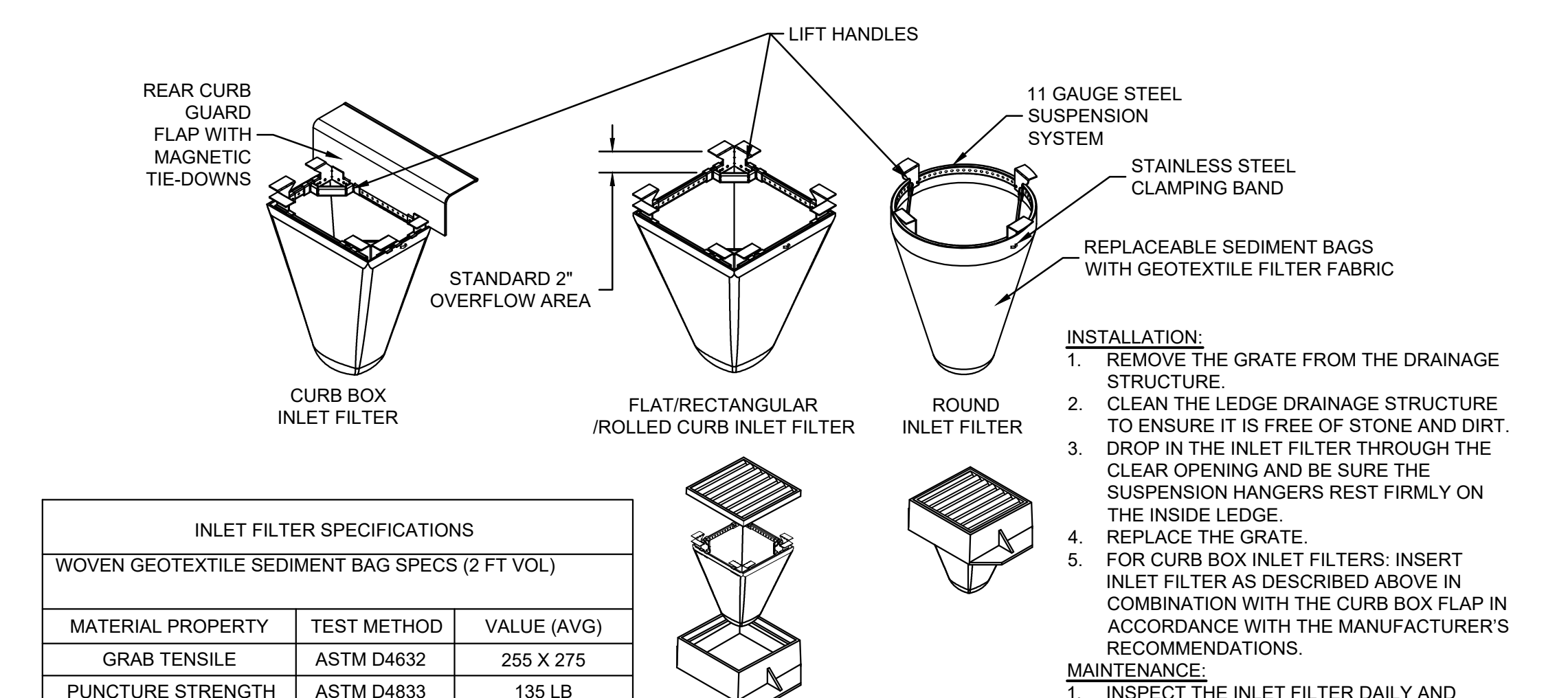
- MAINTENANCE:**
1. DURING THE ACTIVE DEWATERING PROCESS, INSPECTION OF THE PUMPING BAG SHOULD BE REVIEWED FREQUENTLY. SPECIAL ATTENTION SHOULD BE PAID TO THE BUFFER AREA FOR ANY SIGN OF EROSION AND CONCENTRATION OF FLOW. OBSERVE WHERE POSSIBLE THE VISUAL QUALITY OF THE EFFLUENT AND DETERMINE IF ADDITIONAL TREATMENT CAN BE PROVIDED.
2. DISPOSE OF ACCUMULATED SEDIMENT REMOVED DURING PUMPING OPERATIONS IN CONFORMANCE WITH THE SPECIFICATIONS.
3. REPLACE THE BAG OR DISPOSE OF SILT WHEN HALF FULL OF SEDIMENT OR WHEN SEDIMENT HAS REDUCED THE FLOW RATE TO AN IMPRACTICAL RATE.
- SOURCE:**
KRISTAR
DANDY DEWATERING BAG
SEDCATCH

PUMPING BAG
SCALE: NONE

EROSION CONTROL SCHEDULE
SCALE: NONE



- NOTES:**
1. IRRIGATION NEEDED DURING MAY THROUGH SEPTEMBER.
2. IRRIGATION NEEDED FOR 2 TO 3 WEEKS AFTER APPLYING SOD.
3. ANCHORED MULCH IS REQUIRED FOR PERMANENT, DORMANT AND TEMPORARY SEEDING.
4. OPTIMUM SEEDING DATES PROVIDED. DATES MAY BE EXTENDED OR SHORTENED BASED ON PROJECT LOCATION.
5. SEED MIXTURES PROVIDED FOR LAWNS AND HIGH MAINTENANCE AREAS.
- MAINTENANCE:**
1. INSPECT WITHIN 24 HOURS OF EACH RAIN EVENT AND AT LEAST ONCE EVERY 7 CALENDAR DAYS.
2. CHECK FOR EROSION AND MOVEMENT OF MULCH AND REPAIR IMMEDIATELY.
3. MONITOR FOR EROSION DAMAGE AND ADEQUATE COVER (70% DENSITY).
4. RESEED, FERTILIZE OR APPLY MULCH WHERE NECESSARY.



INLET FILTER SPECIFICATIONS		
WOVEN GEOTEXTILE SEDIMENT BAG SPECS (2 FT VOL)		
MATERIAL PROPERTY	TEST METHOD	VALUE (AVG)
GRAB TENSILE	ASTM D4632	255 X 275
PUNCTURE STRENGTH	ASTM D4833	135 LB
TRAPEZOIDAL TEAR	ASTM D4533	75 LB
UV RESISTANCE	ASTM D4355	90%
APP OPEN SIZE (AOS)	ASTM D4751	NO. 20 SIEVE
PERMITTIVITY	ASTM D4491	1.5 S ⁻¹
WATER FLOW RATE	ASTM D4491	200 GPM/SQFT
SEDIMENT REMOVAL EFFICIENCY (8% MIX)	ASTM D7351	82%

SOURCE: FLEX STORM INLET FILTER

INLET PROTECTION
SCALE: NONE

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SCALE VERIFICATION DRAWN BY CAB CHECKED BY JKB APPROVED BY BAS ISSUE DATE MAY 2018 PROJECT NUMBER 185416-04-001	NO.	DATE	INITIALS	REVISION DESCRIPTIONS

WESSLER ENGINEERING
More than a Project™

2018 SANITARY SEWER REHABILITATION
TOWN OF MONON
MONON, INDIANA

EROSION CONTROL DETAILS

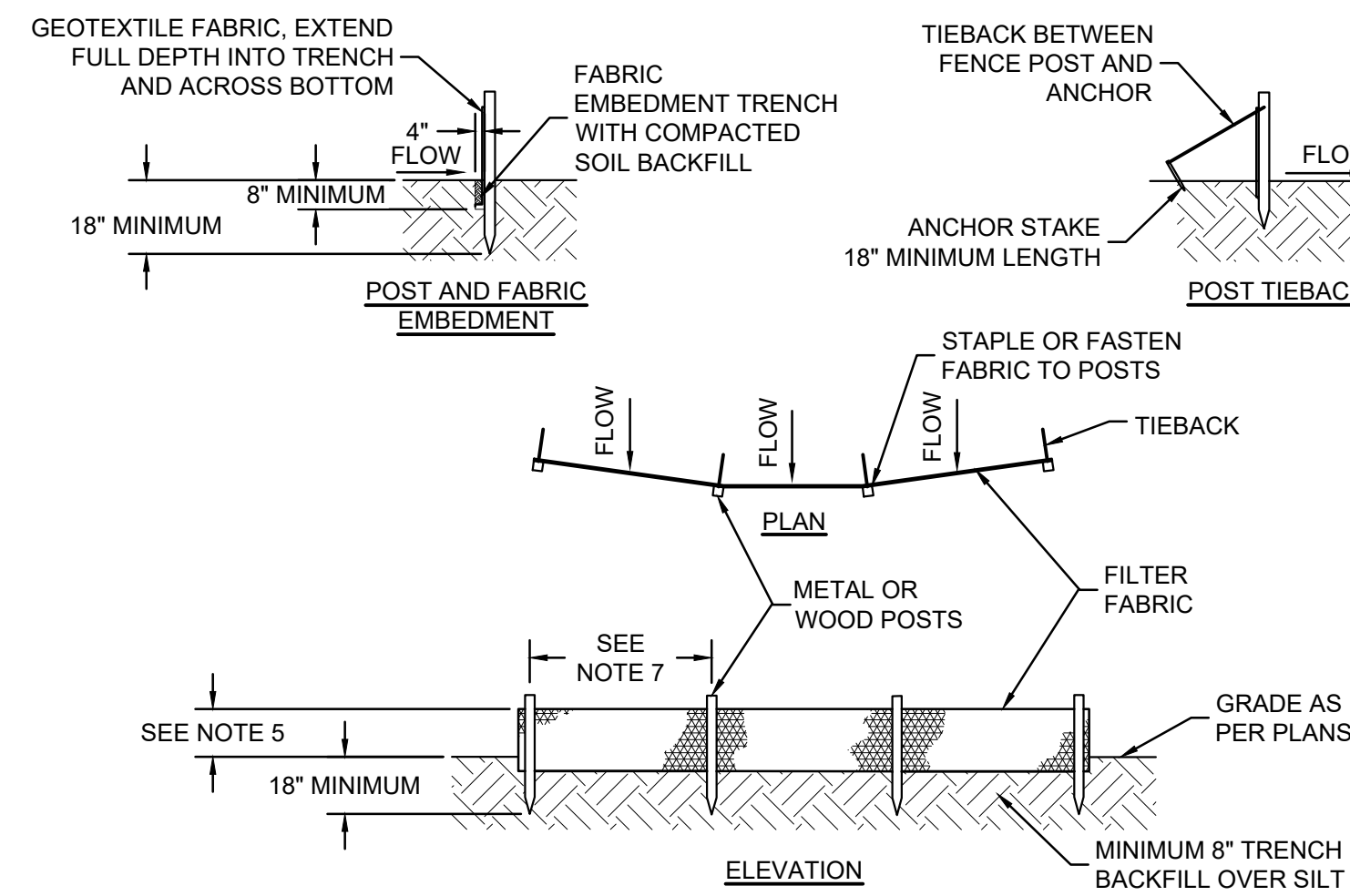
SHEET NO.
13

TOTAL SHEETS
14

MINIMUM PROTECTION ZONE SIZES SHOWN BELOW ARE BASED ON MEASUREMENT OF TREE STEM DIAMETER AT 4.5 FEET ABOVE THE GROUND (DIAMETER AT BREST HEIGHT - DBH). FOR TREES WITH MULTIPLE STEMS (TRUNKS) AT THE MEASURING HEIGHT, THE DBH MEASUREMENTS ARE ADDED TOGETHER TO CREATE AN OVERALL SUM DBH FOR THAT TREE.

TREE DIAMETER (DBH)	TREE PROTECTION ZONE (RADIUS FROM TRUNK)	TREE DIAMETER (DBH)	TREE PROTECTION ZONE (RADIUS FROM TRUNK)
1"	2'	26"	22'
2"	2'	27"	23'
3"	3'	28"	23'
4"	3'	29"	24'
5"	4'	30"	25'
6"	5'	31"	26'
7"	6'	32"	27'
8"	7'	33"	28'
9"	8'	34"	28'
10"	8'	35"	29'
11"	9'	36"	30'
12"	10'	37"	31'
13"	11'	38"	32'
14"	12'	39"	33'
15"	13'	40"	33'
16"	13'	45"	38'
17"	14'	50"	42'
18"	15'	55"	46'
19"	16'	60"	50'
20"	17'	65"	54'
21"	18'	70"	58'
22"	18'	75"	63'
23"	19'	80"	67'
24"	20'	85"	71'
25"	21'	90"	75'

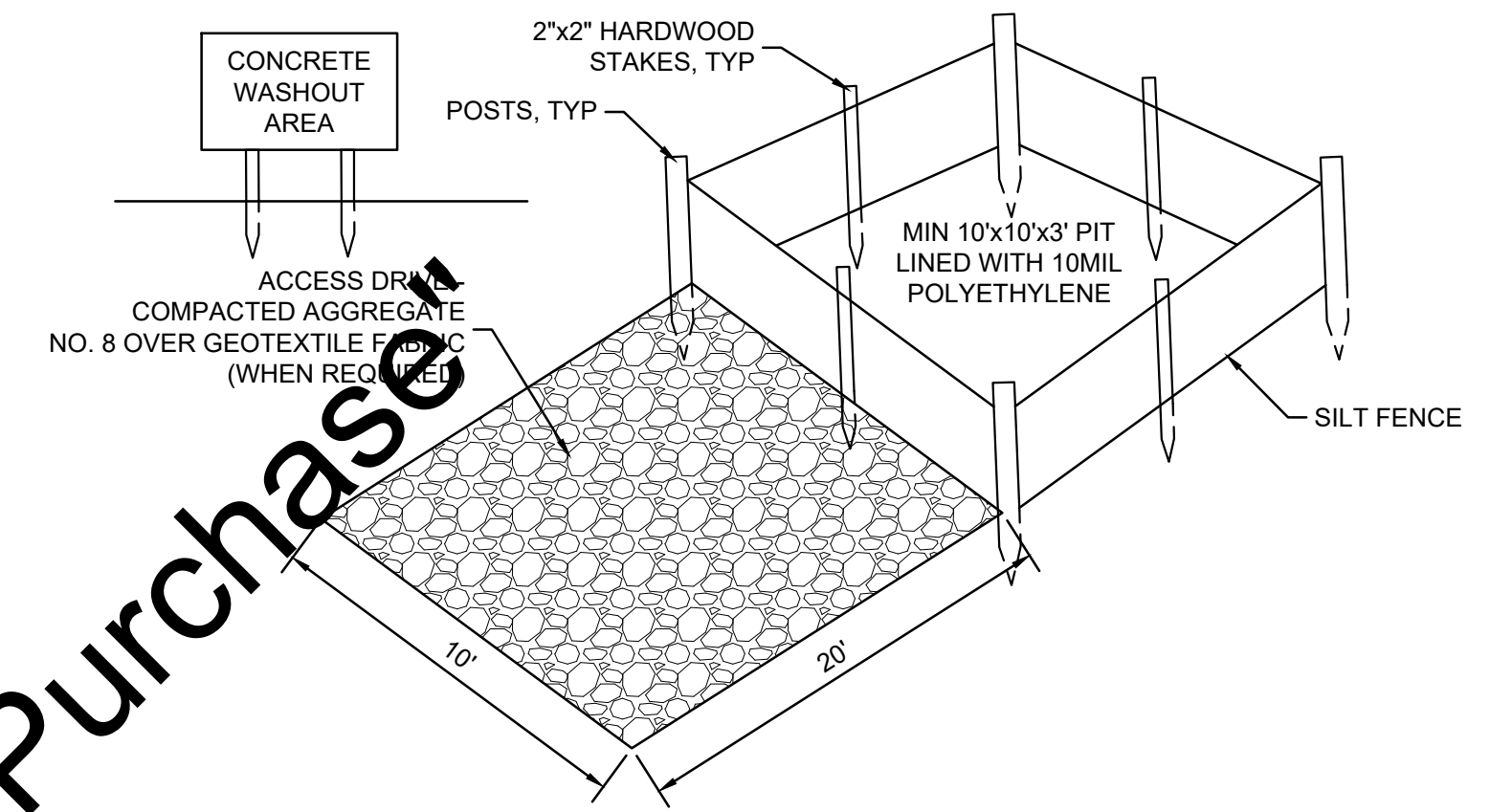
TREE PROTECTION ZONE
SCALE: NONE



NOTES:

1. SYNTHETIC FILTER FABRIC SHALL BE A PERVIOUS SHEET OF WOVEN OR NON-WOVEN GEOTEXTILE FABRIC AND SHALL BE CERTIFIED BY THE MANUFACTURER OR SUPPLIER AS CONFORMING TO THE FOLLOWING REQUIREMENTS:
 - a. TEXTILE STRENGTH AT 20% (MAXIMUM) ELONGATION, PER ASTM D4632.
 - b. WOVEN EXTRA STRENGTH - 50 LB/LINEAR INCH (MINIMUM), NON-WOVEN EXTRA STRENGTH - 70 LB/INCH (MINIMUM).
 - c. WOVEN STANDARD STRENGTH - 30 LB/LINEAR INCH (MINIMUM), NON-WOVEN STANDARD STRENGTH - 50 LB/INCH (MINIMUM).
 - d. APPARENT OPENING SIZE (AOS) (U.S. SIEVE) - NO. 30 PARTICLE SIZE OF 0.6 mm (MAXIMUM), ASTM D4751.
 - e. PERMITTIVITY - 0.05 S⁻¹ (MAXIMUM), ASTM D4911.
 2. POSTS FOR SILT FENCES SHALL BE EITHER 2"x2" SQUARE WOOD OR EQUIVALENT METAL POSTS WITH A MINIMUM LENGTH OF 5'. METAL POSTS SHALL HAVE PROJECTIONS FOR FASTENING WIRE TO THEM.
 3. ANCHOR STAKES FOR SILT FENCES SHALL BE 1"x2" WOOD (PREFERRED) OR EQUIVALENT METAL WITH A MINIMUM LENGTH OF 18".
 4. WIRE FENCE REINFORCEMENT FOR SILT FENCES USING STANDARD STRENGTH FILTER CLOTH SHALL BE A MINIMUM OF 42" IN HEIGHT, A MINIMUM OF 14 GAUGE, AND SHALL HAVE A MAXIMUM MESH SPACING OF 6".
 5. THE HEIGHT OF THE BARRIER SHALL BE A MINIMUM OF 18" AND A MAXIMUM OF 30".
 6. THE FABRIC SHALL BE PURCHASED IN A CONTINUOUS ROLL CUT TO THE LENGTH OF THE BARRIER TO AVOID THE USE OF JOINTS. WHEN JOINTS ARE NECESSARY, FILTER FABRIC SHALL BE SPICED TOGETHER ONLY AT A SUPPORT POST, WITH A MINIMUM 6" OVERLAP, AND SECURELY SEALED.
 7. POSTS SHALL BE SPACED A MAXIMUM OF 6' APART AT THE BARRIER LOCATION AND DRIVEN SECURELY INTO THE GROUND (MINIMUM OF 18"). WHEN STANDARD STRENGTH FABRIC IS USED WITH THE WIRE SUPPORT FENCE, POST SPACING SHALL NOT EXCEED 6'.
 8. THE SPACING OF TIEBACKS SHALL EQUAL THE SPACING OF THE POSTS. ADDITIONAL POST DEPTH OR TIEBACKS MAY BE REQUIRED IN UNSTABLE SOILS.
 9. A TRENCH SHALL BE EXCAVATED APPROXIMATELY 4" WIDE AND A MINIMUM OF 8" DEEP ALONG THE LINE OF POSTS AND UPSLOPE FROM THE BARRIER.
 10. WHEN STANDARD STRENGTH FILTER FABRIC IS USED WITH A WIRE MESH SUPPORT FENCE IT SHALL BE FASTENED SECURELY TO THE UPSLOPE SIDE OF THE POSTS USING HEAVY DUTY 1" WIRE STAPLES, TIE WIRES OR HOG RINGS. THE WIRE SHALL BE DRIVEN INTO THE TRENCH A MINIMUM OF 2" AND SHALL NOT EXTEND MORE THAN 36" ABOVE THE ORIGINAL GROUND SURFACE.
 11. THE STANDARD STRENGTH FILTER FABRIC, WITHOUT A WIRE MESH SUPPORT FENCE, SHALL BE STAPLED OR WIRED TO THE FENCE, AND A MINIMUM 8" OF THE FABRIC SHALL BE EXTENDED INTO THE TRENCH. THE FABRIC SHALL NOT EXTEND MORE THAN 36" ABOVE THE ORIGINAL GROUND SURFACE. DO NOT STAPLE FILTER FABRIC TO EXISTING TREES.
 12. WHEN EXTRA STRENGTH FILTER FABRIC OR BURLAP AND POST SPACING IS LESS THAN THE MAXIMUM SPECIFIED SPACING OF 6', THE WIRE MESH SUPPORT FENCE MAY BE ELIMINATED.
 13. BACKFILL THE TRENCH AND COMPACT THE SOIL OVER THE FILTER FABRIC.
 14. REMOVE SILT FENCES WHEN THEY HAVE SERVED THEIR USEFUL PURPOSE, BUT BEFORE THE UPSLOPE AREA HAS BEEN PERMANENTLY STABILIZED.
 15. SILT FENCE SHALL NOT BE USED AS A DIVERSION AND SHALL NOT BE INSTALLED ACROSS A STREAM, CHANNEL, DITCH, SWALE, ETC.
- MAINTENANCE:**
1. INSPECT AFTER EACH RAINFALL AND DAILY DURING PROLONGED RAINFALL. INSPECT AT LEAST ONCE EVERY 7 CALENDAR DAYS.
 2. REPLACE OR REPAIR FABRIC IMMEDIATELY IF IT DECOMPOSES OR IS DEFECTIVE.
 3. SEDIMENT DEPOSITS SHOULD BE REMOVED AFTER EACH STORM EVENT. THEY MUST BE REMOVED WHEN DEPOSITS REACH APPROXIMATELY HALF THE HEIGHT OF THE BARRIER.
 4. SPREAD ANY SEDIMENT DEPOSITS REMAINING IN PLACE AFTER THE SILT FENCE IS NO LONGER REQUIRED AND DRESS TO CONFORM WITH THE FINISHED GRADING.

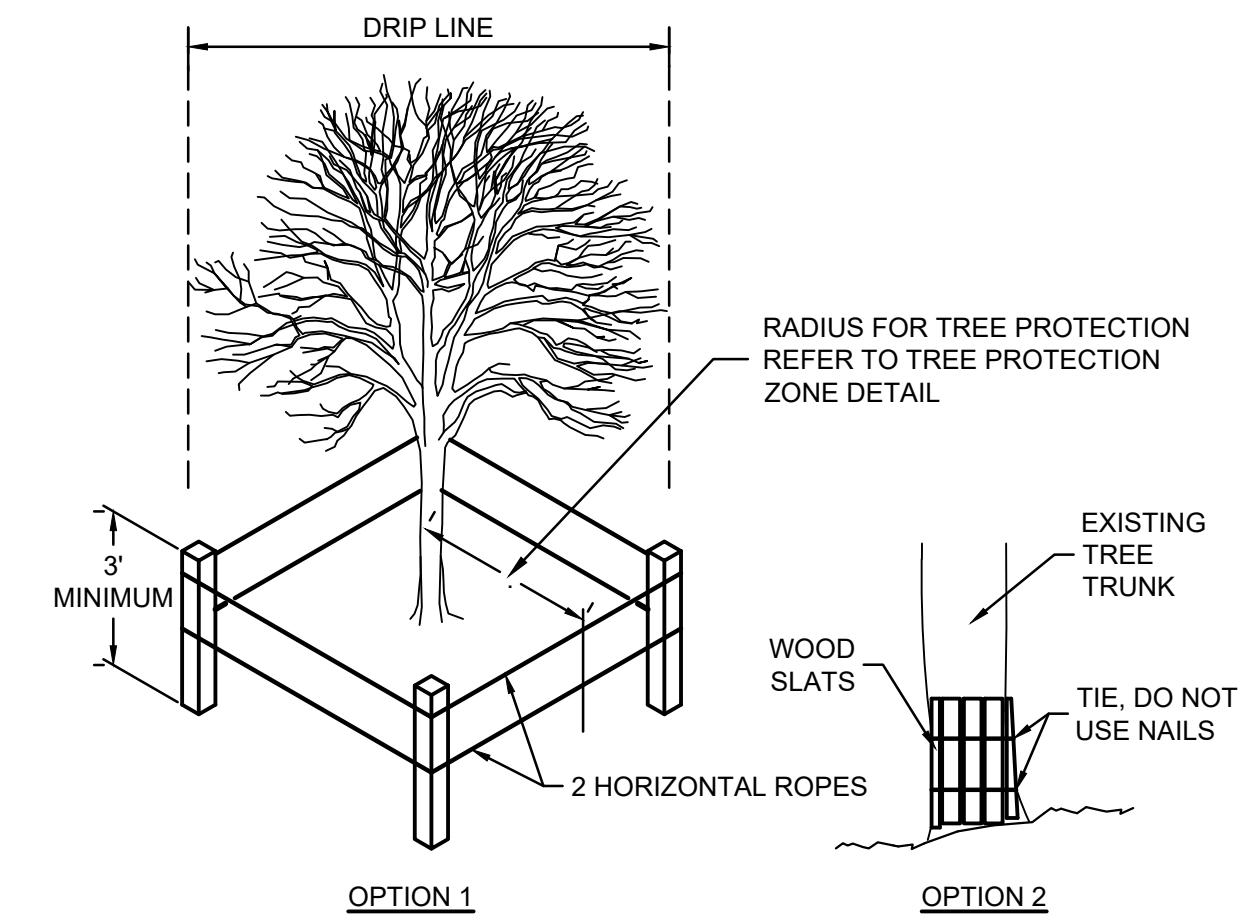
SILT FENCE
SCALE: NONE



NOTES:

1. INSTALL SILT FENCE TO FILTER RUNOFF THAT FLOWS INTO THE WASHOUT AREA.
 2. THE POLYETHYLENE LINER SHALL BE A MINIMUM OF 10 MIL AND FREE OF TEARS, HOLES, AND OTHER DEFECTS. THE POLYETHYLENE LINING SHALL BE OF ADEQUATE SIZE TO EXTEND OVER THE CONTAINMENT AREA.
 3. POSTS FOR SILT FENCES SHALL BE EITHER 4" DIAMETER WOOD OR 1.33 LBS PER LINEAR FOOT STEEL WITH A MINIMUM LENGTH OF 5'. STEEL POSTS SHALL HAVE PROJECTIONS FOR FASTENING WIRE TO THEM. POSTS SHALL BE USED TO SECURE THE POLYETHYLENE LINING AND SHALL SUPPORT THE SILT FENCE.
 4. STAKES FOR SILT FENCES SHALL BE 2"x2" WOOD (PREFERRED) OR EQUIVALENT METAL WITH A MINIMUM LENGTH OF 3'.
 5. BACKFILL THE SILT FENCE TRENCH AND COMPACT THE SOIL OVER THE FILTER FABRIC.
 6. LOCATE WASHOUTS AT LEAST 50' FROM ANY CREEKS, WETLANDS, DITCHES, KARST FEATURES OR STORM DRAIN/CONVEYANCES.
- WASHOUT PROCEDURES:**
1. DO NOT LEAVE EXCESS MUD IN THE CHUTES OR HOPPER AFTER POURING CONCRETE. MAKE EVERY EFFORT TO EMPTY THE CHUTE AND HOPPER AT THE POUR. THE LESS MATERIAL LEFT IN THE CHUTES AND HOPPER, THE QUICKER AND EASIER THE CLEANOUT. SMALL AMOUNTS OF EXCESS CONCRETE (NOT WASHOUT WATER) MAY BE DISPOSED OF IN AREAS THAT WILL NOT FLOW TO AN AREA THAT IS TO BE PROTECTED.
 2. SCRAPE AS MUCH MATERIAL FROM THE CHUTES AS POSSIBLE BEFORE WASHING THEM. USE NON-WATER CLEANING METHODS TO MINIMIZE THE CHANCE FOR WASTE TO FLOW OFF SITE.
 3. STOP WASHING OUT IN AN AREA IF YOU OBSERVE WATER RUNNING OFF THE DESIGNATED AREA OR IF THE WATER IS NOT BEING CONTAINED WITHIN THE WASHOUT AREA.
 4. DO NOT BACK FLUSH EQUIPMENT AT THE PROJECT SITE.
 5. DO NOT USE ADDITIVES WITH WASH WATER.
 6. DO NOT WASH OUT OR DRAIN WASTE WATERS TO STORM DRAINS, WETLANDS, STREAMS, RIVERS, CREEKS, DITCHES OR STREETS.
- MAINTENANCE:**
1. INSPECT SILT FENCE BARRIERS AND POLYETHYLENE LINER IMMEDIATELY AFTER EACH RAINFALL AND AT LEAST DAILY DURING PROLONGED RAINFALL. MAKE ANY REQUIRED REPAIRS IMMEDIATELY.
 2. INSPECT ACCESS DRIVE PERIODICALLY AND REPLACE DISPLACED AGGREGATE.
 3. ADDITIONAL REQUIREMENTS PROVIDED IN SPECIFICATIONS.

CONCRETE WASHOUT
SCALE: NONE



NOTES:

1. PROTECT TREES WHERE NOTED ON THE DRAWINGS DURING EXCAVATION TO PROTECT TREE ROOTS.
 2. OPTION 1 SHALL BE THE STANDARD TREE PROTECTION METHOD. MULTIPLE TREES MAY BE PROTECTED BY A SINGLE SET OF PERIMETER ROPES PROVIDED THE APPROPRIATE TREE PROTECTION ZONE IS MAINTAINED FOR EACH TREE.
 3. OPTION 2 TREE PROTECTION METHOD MAY BE USED TO PREVENT BARK REMOVAL OR DAMAGE TO THE TRUNK OF THE TREE.
- MAINTENANCE:**
1. INSPECT AT LEAST ONCE EVERY 7 CALENDAR DAYS.
 2. REPAIR PERIMETER BARRIERS IF DAMAGED.
 3. INSPECT FOR DAMAGE FROM CONSTRUCTION ACTIVITIES. REPAIR WOUNDS SIMPLY BY REMOVING DAMAGED BARK AND WOOD TISSUE. DO NOT USE TREE PAINT.
 4. CABLE AND BRACE ANY TRUNK SPLITS, WEAK FORKS, AND LARGE LIMBS.

TREE PROTECTION METHODS
SCALE: NONE

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SCALE VERIFICATION BAR IS ONE INCH LONG ON ORIGINAL DRAWING	DRAWN BY	CAB	NO.	DATE	INITIALS	REVISION DESCRIPTIONS			2018 SANITARY SEWER REHABILITATION TOWN OF MONON MONON, INDIANA EROSION CONTROL DETAILS	SHEET NO.
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	ISSUE DATE	MAY 2018								14
	PROJECT NUMBER	185416-04-001								