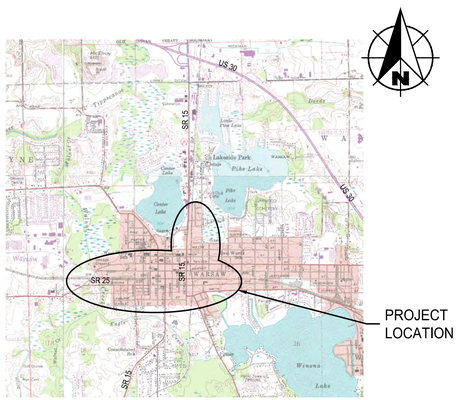
SEWER REHABILITATION - SEWER REPLACEMENT

FOR THE

CITY OF WARSAW BOARD OF PUBLIC WORKS & SAFETY

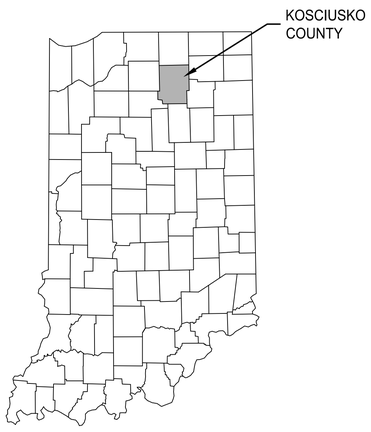
WARSAW, IN



WARSAW

VICINITY MAP

SCALE: NONE



STATE LOCATION MAP

SCALE: NONE

WESSLER ENGINEERING

More than a Project™

FORT WAYNE
6409 Constitution Drive
Fort Wayne, Indiana 46804
Phone: (260) 422-8279 - Fax: (260) 422-8280
www.wesslerengineering.com

PROJECT NO. 196217-04-001

DRAWINGS PREPARED FOR:

HONORABLE JOSEPH M. THALLEMER, MAYOR

BOARD OF PUBLIC WORKS AND SAFETY

JOSEPH M. THALLEMER, PRESIDENT
JEFF GROSS
GEORGE CLEMENS

JAMES EMANS, P.E., CITY ENGINEER
BRIAN DAVISON, UTILITY MANAGER

SEPTEMBER 2017

MEGAN E. CARR REGISTERED No. 10910636 STATE OF INDIANA PROFESSIONAL ENGINEER 09/27/2017

MEGAN E. CARR
REGISTERED ENGINEER STATE OF INDIANA NO. 10910636

2011 IMAGERY FROM INDIANA STATE MAP.

LOCATION AND SCOPE OF WORK PLAN

0 125 250 500 FT

1"=250'

HORIZONTAL AND VERTICAL CONTROL INFORMATION

NOTES:
1. A FIELD SURVEY WAS PERFORMED IN AUGUST 2017.
2. COORDINATES (INDIANA STATE PLANE, EAST ZONE, NAD 83) AND ELEVATIONS (NAVD 88) ARE BASED ON INCORS.
3. UNITS ARE U.S. SURVEY FEET.
4. CONTROL POINTS WERE SET USING GPS.
5. A LEVEL LOOP WAS PERFORMED ON THE CONTROL POINTS AND TBMS.

BENCHMARK DESCRIPTION:
1. TBM NO. 20 - CUT X IN SOUTHEAST BONNET BOLT ON THE FIRE HYDRANT IN THE NORTHWEST CORNER OF MORTON STREET AND PRAIRIE STREET. EL 834.18
2. TBM NO. 21 - CUT X IN SOUTHWEST BONNET BOLT ON THE FIRE HYDRANT IN THE NORTHEAST CORNER OF PRAIRIE STREET AND HARDING STREET. EL 827.46
3. TBM NO. 22 - CUT X IN NORTHWEST BONNET BOLT ON THE FIRE HYDRANT IN THE SOUTHEAST CORNER OF WHEELER STREET AND HARDING STREET. EL 846.95
4. TBM NO. 25 - MAGNAIL SET IN NORTH SIDE OF POWER POLE APPROXIMATELY 13' SOUTH OF CENTER STREET AND 123' EAST OF FRIEND STREET. EL 823.65
5. TBM NO. 27 - CUT X IN TOP OF CONCRETE CURB APPROXIMATELY 20' EAST OF BUFFALO STREET AND 8' SOUTH OF ALLEY. EL 824.40
6. TBM NO. 28 - CUT X IN WEST BONNET BOLT ON THE FIRE HYDRANT IN THE NORTHEAST CORNER OF MARKET STREET AND WASHINGTON STREET. EL 822.47
7. TBM NO. 29 - CUT X IN SOUTHEAST BOLT OF LIGHT POLE JEBE APPROXIMATELY 26' WEST OF LAKE STREET AND 17' SOUTH OF ALLEY. EL 822.71
8. TBM NO. 30 - CUT X IN SOUTHEAST BOLT OF STRAIN POLE JEBE APPROXIMATELY 44' NORTH OF CENTER STREET AND 27' EAST OF INDIANA STREET. EL 825.83
9. TBM NO. 33 - MAGNAIL SET IN SOUTHWEST SIDE OF POWER POLE APPROXIMATELY 13' EAST OF ELLSWORTH STREET AND 128' NORTH OF CANAL STREET. EL 815.93

DRAWING INDEX

CONTROL POINTS

POINT	NORTHING	EASTING	ELEVATION	DESCRIPTION
1	2180012.99	273645.10	833.20	MAGNAIL
2	2179710.15	273643.94	824.51	5/8" REBAR
3	2179723.72	274025.86	823.41	MAGNAIL
4	2180029.77	273978.96	835.26	MAGNAIL
5	2180267.11	273972.80	843.47	MAGNAIL
6	2180792.33	273993.94	838.60	MAGNAIL
7	2180925.83	275858.03	824.26	MAGNAIL
8	2180907.73	275662.74	825.42	MAGNAIL
9	2180904.88	275996.33	827.38	MAGNAIL
10	2181809.74	273651.90	819.77	5/8" REBAR
11	2181774.11	273986.07	826.61	5/8" REBAR
12	2181414.80	275081.34	818.30	MAGNAIL
13	2181791.46	275143.28	819.91	MAGNAIL
14	2181707.78	275451.93	821.91	MAGNAIL
15	2181406.24	275505.18	822.81	MAGNAIL
16	2181857.70	276211.89	824.86	MAGNAIL
17	2181557.26	276174.41	825.16	MAGNAIL
24	2181992.78	273670.46	821.43	5/8" REBAR
26	2181824.00	273757.74	823.70	MAGNAIL
31	2183833.78	277303.53	815.14	MAGNAIL
32	2184014.49	277325.34	818.60	MAGNAIL

SOIL BORINGS

DESCRIPTION	LATITUDE	LONGITUDE	ELEVATION
B-01	N41.23832859	W85.86454231	820.0
B-02	N41.23808044	W85.86376497	823.0
B-03	N41.23782461	W85.85924765	820.0
B-04	N41.23740248	W85.85926066	819.0
B-05	N41.23748700	W85.85795174	823.0
B-06	N41.23772884	W85.85534927	825.0
B-07	N41.23272850	W85.86458028	828.0
B-08	N41.23276342	W85.86332682	827.0
B-09	N41.23404839	W85.86335212	841.0
B-10	N41.23472975	W85.86334934	844.0
B-13	N41.24341548	W85.85126759	812.0

SCALE VERIFICATION		
BAR IS ONE INCH LONG ON ORIGINAL DRAWING	DRAWN BY	JRW
	CHECKED BY	JEB
	APPROVED BY	MEC
	ISSUE DATE	SEPTEMBER 2017
	PROJECT NUMBER	196217-04-001

NO.	DATE	INITIALS	REVISION DESCRIPTIONS

MEGAN E. CARR REGISTERED No. 10910636 STATE OF INDIANA PROFESSIONAL ENGINEER 09/27/2017

Megan E. Carr

WESSLER ENGINEERING
More than a Project™

SEWER REHABILITATION - SEWER REPLACEMENT

CITY OF WARSAW BOARD OF PUBLIC WORKS & SAFETY
WARSAW, IN

LOCATION AND SCOPE OF WORK PLAN, AND DRAWING INDEX

SHEET NO. 02

TOTAL SHEETS 20

EXISTING FEATURES LEGEND

SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION
BM	BENCH MARK	CB	CISTERN		EASEMENT - CONSTRUCTION/PERMANENT
TBM	TEMPORARY BENCH MARK	EM	ELECTRIC METER		LOT BOUNDARY
SB 01	SOIL BORING LOCATION	AC	AIR CONDITIONING UNIT		PROPERTY BOUNDARY
	SECTION CORNER	XXX	UTILITY RISER (DEFINED BY UTILITY)		RIGHT-OF-WAY - TEMPORARY/PERMANENT
	DRILL HOLE IN CONCRETE/HARRISON MONUMENT	XXX	UTILITY PEDESTAL (DEFINED BY UTILITY)		SECTION BOUNDARY
CP	CONTROL POINT (SET/FOUND)	X	UTILITY MARKER (DEFINED BY UTILITY)		WETLANDS
MS	MAGNETIC NAIL (SET/FOUND)	J	JOINT POWER/TELEPHONE POLE	849	CONTOUR - INTERMEDIATE ELEVATION
BS	BOAT SPIKE (SET/FOUND)	L	LIGHT POLE	850	CONTOUR - INDEX ELEVATION
PK	PK NAIL (SET/FOUND)	LP	LIGHT ON POWER POLE	OHE OHE	OVERHEAD ELECTRIC
RS	RAILROAD SPIKE (SET/FOUND)	LJ	LIGHT ON JOINT POLE	OHC OHC	OVERHEAD CABLE TV
R/W	R/W MARKER - CONCRETE/GRANITE/STONE	P	POWER POLE	OHT OHT	OVERHEAD TELEPHONE
IP	IRON PIPE/IRON PIN/REBAR (WITH DIAMETER)	T	TELEPHONE POLE	UGC UGC	UNDERGROUND CABLE TV
BP	BRASS PLUG		LAMP POST	UGE UGE	UNDERGROUND ELECTRIC
C	CABLE TV MANHOLE		GUY ANCHOR	UGF UGF	UNDERGROUND FIBER OPTIC
E	ELECTRIC MANHOLE		GUY POLE OR STUB	G G G	GAS MAIN
G	GAS MANHOLE		CONTROLLER CABINET	DG DG	DIGESTER GAS
O	OTHER MANHOLE	FP	FLAG POLE	P P P	PETROLEUM MAIN
T	TELEPHONE MANHOLE		POST	UGT UGT	UNDERGROUND TELEPHONE
TEL	TELEPHONE VAULT		GROUND LIGHT	W W W	WATER MAIN
I	TRAFFIC MANHOLE	M	MAILBOX	W W W	WATER SERVICE
H	TRAFFIC HANDHOLE	M M	DOUBLE/MULTIPLE MAILBOX	FM FM	FORCEMAIN
W	WATER MANHOLE		MAST ARM POLE		GRAVITY SEWER PIPE
A	AIR RELEASE VALVE		TRAFFIC SIGNAL STRAIN POLE		PLANT CHLORINE PIPE
S	SANITARY SEWER MANHOLE		SIGNAL LOOP DETECTOR BOX		TOP OF BANK/TOE OF SLOPE
D	DRAINAGE/STORM SEWER MANHOLE		SIGNAL LOOP DETECTOR LOOP		CENTERLINE OF DITCH/SWALE/STREAM
CO	SANITARY SEWER CLEANOUT		SIGN - SINGLE POST	x x x x x x x x x x	FENCE - FIELD
ST	SEPTIC TANK		SIGN - DOUBLE POST	o o o o o o o o o o	FENCE - METAL
VV	VALVE VAULT		SIGN - RAILROAD SIGNAL	x x x x x x x x x x	FENCE - WOOD
	BEEHIVE INLET		SIGN - RAILROAD CROSSING		GUARDRAIL
	CURB INLET		BUSH		STREAM
	DROP INLET		STUMP		TREE/BRUSH LINE
	CATCH JEBIN		TREE - CONIFEROUS		
DS	DOWNSPOUT		TREE - DECIDUOUS		
GM	GAS METER		ROCK OUTCROP		
GV	GAS VALVE		SATELLITE		
GS	GAS SERVICE VALVE				
PV	PETROLEUM VALVE				
PS	PETROLEUM SHUTOFF VALVE				
GM	GAS STATION MONITORING WELL				
GFC	GAS STATION FILL CAP				
GW	NATURAL GAS WELL/STORAGE WELL				
SP	SPRINKLER HEAD				
SPH	SPRINKLER CONTROL VALVE				
WM	WATER METER				
WV	WATER VALVE				
WS	WATER SERVICE VALVE				
W	WATER WELL				
WW	WET WELL				
FH	FIRE HYDRANT				
	PROCESS VALVE				
	YARD HYDRANT				

*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. THE SYMBOLS ARE NOT TO SCALE.

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	PT	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 JORDAN IRON WORKS	SECT	SECTION
EL	ELEVATION	SF	SQUARE FEET
EX	EXISTING	SHT	SHEET
EXP	EXPANSION	SPECS	SPECIFICATION(S)
FFE	FINISH FLOOR ELEVATION	SQ	SQUARE
FM	FORCE MAIN	SRF	STATE REVOLVING FUND
FND	FOUND	ST	STREET
FT	FEET	STA	STATION
FTG	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.

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

UTILITY CONTACTS

ELECTRIC
KOSCIUSKO REMC
370 SOUTH 250 EAST
WARSAW, IN 46582
800-790-7362
ATTN: RYAN MILLER

GAS
NIPSCO
801 E. 86TH AVE.
MERRILVILLE, IN 46410
219-647-4912
ATTN: MICHELLE VOS

WATER
INDIANA-AMERICAN WATER COMPANY, INC
555 E. COUNTY LINE RD., STE 201
GREENWOOD, IN 46143
317-885-2447
ATTN: EZAT NAYERI

NOTE:
IN THE EVENT OF WATER CONFLICT, CONTACT EZAT NAYERI AT INDIANA–AMERICAN WATER COMPANY TO COORDINATE WORK

WARSAW UTILITIES
2056 N. 150 W
WARSAW, IN 46580
574-372-9562
ATTN: BRIAN DAVISON

ELECTRIC
NIPSCO
801 E. 86TH AVE.
MERRILVILLE, IN 46410
219-647-5036
ATTN: ROCKY YBARRA

FIBER OPTIC/TELEPHONE
CENTURY LINK
213 W. LAPORTE ST
PLYMOUTH, IN 46563
574-935-1247
ATTN: BRUCE EMERICK

WARSAW ENGINEERING
102 S. BUFFALO ST.
WARSAW, IN 46580
574-372-9548
ATTN: JAMES EMANS

GENERAL NOTES:
1. 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.
2. TAKE CARE TO AVOID DAMAGE TO PAVED AREAS WHICH ARE NOT SPECIFICALLY CALLED OUT FOR REPAIR. REPAIR, OR REPLACE ALL SUCH PAVEMENTS WHICH ARE DAMAGED BY CONSTRUCTION ACTIVITIES AND CONSTRUCTION TRAFFIC AT NO ADDITIONAL COST TO THE OWNER.
3. OBTAIN ALL TEMPORARY EASEMENTS REQUIRED FOR THE CONSTRUCTION OF THE PROJECT AT NO ADDITIONAL COST TO THE OWNER.
4. 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.
5. 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.
6. BRACE AND PROTECT ALL UTILITY POLES AND EXISTING STRUCTURES ADJACENT TO NEW EXCAVATIONS. UTILITY POLE BRACING SHALL BE AS DIRECTED BY THE GOVERNING UTILITY.
7. MAINTAIN EXISTING STORMWATER DRAINAGE FOR THE ENTIRE DURATION OF THE PROJECT.
8. DO NOT DISTURB EXISTING MANHOLES OR INLETS, UNLESS NOTED OTHERWISE.
9. COORDINATE STAGING AREA LOCATIONS WITH THE OWNER.
10. ALL CONSTRUCTION TRAFFIC SHALL USE MAJOR ROADS. NO CONSTRUCTION TRAFFIC SHALL USE LOCAL STREETS FOR INDIRECT ACCESS.
11. TO CONTROL DUST, REMOVE SOIL FROM STREETS USED BY CONSTRUCTION TRAFFIC DAILY, VACUUM AND WATER AS NECESSARY AND/OR AS DIRECTED BY THE OWNER.
12. NORTHING AND EASTING INFORMATION IS GIVEN AT CENTER OF STRUCTURE UNLESS OTHERWISE NOTED.
13. RESET ALL MAILBOXES AND SIGNS DISTURBED BY CONSTRUCTION ACTIVITIES.
14. IF REQUIRED, PLACE TEMPORARY OVERNIGHT AGGREGATE WEDGES AT DRIVEWAYS TO ALLOW PROPERTY OWNER ACCESS.
15. ALL EXISTING AND NEW UTILITY INFORMATION, INCLUDING BUT NOT LIMITED TO LOCATION, SIZE AND INVERT ELEVATION, IS SHOWN BASED UPON AVAILABLE INFORMATION. HOWEVER, THE ENGINEER DOES NOT GUARANTEE OR ASSUME SUCH INFORMATION TO BE TRUE, ACCURATE, ALL INCLUSIVE OR EVEN APPROXIMATE. THE CONTRACTOR SHALL CONTACT THE INDIANA UNDERGROUND PLANT PROTECTION SERVICE (IUPPS) AT LEAST FORTY-EIGHT (48) HOURS IN ADVANCE OF ANY CONSTRUCTION ACTIVITY. THE CONTRACTOR MUST CONTACT NON-MEMBER UTILITIES DIRECTLY. THE CONTRACTOR SHALL DETERMINE WHICH UTILITIES MAY CONFLICT WITH HIS WORK AND VERIFY THEIR LOCATION, SIZE, ELEVATION, ETC; ADJUST HIS WORK ACCORDINGLY; AND NOTIFY THE ENGINEER OF ANY CONFLICTS AND/OR ADJUSTMENTS. THE CONTRACTOR SHALL REFER TO APPLICABLE SECTIONS OF THE SPECIFICATIONS RELATIVE TO THE ABOVE.
16. EXISTING UTILITY SERVICE LINES TO INDIVIDUAL CUSTOMERS ARE NOT SHOWN ON THE DRAWINGS. THE CONTRACTOR SHALL ASSUME THAT UNDERGROUND SERVICE LINES FOR ALL UTILITIES EXIST TO EACH PROPERTY ALONG THE ROUTE OF THE PLANNED IMPROVEMENTS.
17. COORDINATE ALL WORK WITH THE RESPECTIVE UTILITIES. THE CONTRACTOR SHALL SCHEDULE WORK ACCORDINGLY AND NOTIFY ALL UTILITIES A MINIMUM OF TWO (2) WEEKS IN ADVANCE OF ANY CONSTRUCTION ACTIVITY.
18. COORDINATE ALL CONFLICTS WITH WATER METERS, SERVICES AND MAINS WITH EZAT NAYERI AT INDIANA-AMERICAN WATER COMPANY. NOTIFY INDIANA-AMERICAN WATER COMPANY A MINIMUM OF TWO (2) WEEKS IN ADVANCE OF ANY CONFLICT WITH A WATER FACILITY TO ALLOW FOR RELOCATION COORDINATION. MAINTAIN VERTICAL AND HORIZONTAL SEPARATION FOR ALL SANITARY SEWERS AND WATER MAINS, IN ACCORDANCE WITH 327 IAC 3-6-9.
19. COORDINATE ANY PLANNED UTILITY SERVICE INTERRUPTIONS WITH THE RESPECTIVE UTILITIES AND THE UTILITIES' AFFECTED CUSTOMERS. SERVICE INTERRUPTIONS SHOULD NOT LAST MORE THAN FOUR (4) HOURS. THE CONTRACTOR SHALL GIVE WRITTEN NOTICE TO ALL AFFECTED UTILITY CUSTOMERS AND/OR PROPERTY OWNERS AT LEAST TWENTY-FOUR (24) HOURS, BUT NOT MORE THAN SEVENTY-TWO (72) HOURS, PRIOR TO ANY PLANNED INTERRUPTION OF UTILITY SERVICE.
20. USE CAUTION DURING THE EXECUTION OF WORK TO PREVENT DAMAGE TO EXISTING UTILITIES. THE CONTRACTOR SHALL BE RESPONSIBLE FOR REPAIR OR REPLACEMENT OF ALL PUBLIC AND/OR PRIVATE FACILITIES DAMAGED AS A RESULT OF CONTRACTOR'S OPERATIONS.
21. MAINTAIN SANITARY SEWER FLOWS DURING THE ENTIRE DURATION OF THE PROJECT. CONDUCT BYPASS PUMPING OPERATIONS AS NECESSARY, AND PER SPECIFICATION 02734.
22. USE CAUTION SO AS TO NOT DAMAGE STATE, COUNTY, CITY OR PRIVATE PROPERTY. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL DAMAGES AS A RESULT OF HIS OPERATIONS, INCLUDING DAMAGE TO DRAINAGE STRUCTURES, FIELD TILES, AND LANDSCAPING (INCLUDING FENCING). THE CONTRACTOR SHALL BE RESPONSIBLE FOR REPAIR AND/OR REPLACEMENT OF DAMAGED ITEMS AT HIS EXPENSE AND AT NO ADDITIONAL COST TO THE OWNER. ALL REPAIR AND/OR REPLACEMENT WORK SHALL BE PERFORMED TO THE SATISFACTION OF THE PERMITTING AGENCY, THE OWNER AND THE ENGINEER.
23. THE CONTRACTOR IS RESPONSIBLE FOR THE INSTALLED WORK AND SHALL COMPLY WITH ALL APPLICABLE PERMITS AND REGULATIONS. APPLICABLE PERMITS ISSUED TO THE OWNER WILL BE MADE AVAILABLE TO THE CONTRACTOR. CONTRACTOR SHALL CONTACT ALL APPLICABLE PERMITTING AGENCIES WITHIN THE TIME PERIOD SPECIFIED BY THAT AGENCY PRIOR TO BEGINNING CONSTRUCTION.
24. ALL EQUIPMENT, APPURTENANCES AND PIPING REMOVED AS PART OF THE DEMOLITION SHALL BE FIRST OFFERED TO THE OWNER FOR SALVAGE. THE CONTRACTOR SHALL DELIVER SALVAGED ITEMS SELECTED BY THE OWNER TO A LOCATION DESIGNATED BY THE OWNER OR ENGINEER. IN THE EVENT THE OWNER DOES NOT ELECT TO KEEP THE REMOVED EQUIPMENT/APPURTENANCES, THE CONTRACTOR SHALL REMOVE SUCH ITEMS FROM THE SITE AND DISPOSE OF THE REMOVED EQUIPMENT/APPURTENANCES AT A LOCATION APPROVED FOR SUCH DISPOSAL AT THE CONTRACTOR'S EXPENSE.
25. LENGTHS OF SANITARY SEWER PIPES AS SHOWN ON THE DRAWINGS AND INDICATED AS LINEAR FEET (LF) ARE FROM CENTER TO CENTER OF STRUCTURES.
26. ALL PIPE CROSSINGS SHALL HAVE COMPACTED NO. 8 CRUSHED STONE PLACED BETWEEN THE PIPES TO PREVENT PIPE SETTLEMENT UNLESS SHOWN OTHERWISE ON THE DRAWINGS. FOR PIPE CROSSINGS LESS THAN OR EQUAL TO 6" REFER TO THE CONCRETE CRADLE DETAIL ON SHEET 17.
27. SANITARY SERVICE LATERAL LOCATIONS SHOWN ARE APPROXIMATE AND BASED UPON CCTV LOGS PROVIDED BY THE CITY OF WARSAW. ALL SERVICE LATERALS MAY NOT BE SHOWN. CONFIRM THAT ALL ACTIVE SERVICE LATERALS HAVE A DEDICATED CONNECTION TO 'SEWER MAIN' PRIOR TO ABANDONMENT OF IDENTIFIED SEWER SEGMENTS. SHARED LATERAL CONNECTIONS WILL NOT BE PERMITTED.
28. SOIL BORING LOCATIONS (SHOWN ON SHEET 02) WERE MARKED BY ALT & WITZIG. ALL LOCATIONS ARE SHOWN AS APPROXIMATE. ALL LOCATIONS WERE DETERMINED IN THE FIELD WITH REFERENCE TO EXISTING LANDMARKS. SEE PROJECT MANUAL, APPENDIX A FOR ADDITIONAL INFORMATION.
29. THE CONTRACTOR, IN COORDINATION WITH THE OWNER, SHALL TERMINATE SANITARY LATERAL REPLACEMENTS AT A POINT IN WHICH THE EXISTING SANITARY LATERAL IS IN REASONABLY GOOD CONDITION TO INSTALL A FERNCO COUPLING.
30. ALL SANITARY SEWER PIPE, INCLUDING GRAVITY SEWERS, LATERAL WYES AND SERVICE LATERAL PIPE LOCATED WITHIN 50 FEET OF PRIVATE WELLS SHALL BE SDR 21 PVC WATER GRADE PRESSURE PIPE UNLESS SPECIFICALLY INDICATED OTHERWISE. ALL SANITARY SEWER PIPE, INCLUDING GRAVITY SEWERS, LATERAL WYES AND SERVICE LATERAL PIPE NOT LOCATED WITHIN 50 FEET OF PRIVATE WELLS SHALL BE SDR 35 PVC SEWER GRADE PIPE, UNLESS SPECIFICALLY INDICATED OTHERWISE.
31. THE CONTRACTOR SHALL FIELD VERIFY AND DETERMINE EXACT LOCATIONS OF ALL PRIVATE WELLS IN THE PROJECT AREA.
32. VERIFY EXISTING STORM SEWER INVERTS AND LOCATIONS PRIOR TO CONSTRUCTION AND DETERMINE IF THERE ARE ANY DISCREPANCIES OR CONFLICTS. THE CONTRACTOR SHALL ADJUST SEWER LATERALS AS NECESSARY TO AVOID CONFLICTS. LATERALS THAT REQUIRE FIELD ADJUSTMENT SHALL BE LAID AT THE MINIMUM SLOPE AS SPECIFIED IN THE DRAWINGS AND SPECIFICATIONS.
33. CONTACT INDIANA-AMERICAN WATER COMPANY FOR ACCESS TO AND PURCHASE OF WATER.
34. RIGHT-OF-WAY AND PROPERTY LINES ARE BASED UPON GIS DATA PROVIDED BY THE CITY OF WARSAW.
36. CONSTRUCTION ACTIVITIES, INCLUDING CONSTRUCTION ENTRANCE AND EXIT, SHALL AVOID IMPACTS TO WETLANDS LOCATED ADJACENT TO THE PROJECT.
37. THIS PROJECT REQUIRES EXTENSIVE COORDINATION WITH THE CITY, ENGINEER, AND OTHER CONTRACTORS INCLUDING, BUT NOT LIMITED TO: CONSTRUCTION TIMING, WORK LOCATION SCHEDULE, TRAFFIC PLANS AND ROAD CLOSURES, AS THERE ARE THREE SEWER REHABILITATION PROJECTS FOR THE CITY OF WARSAW.
38. 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 RELIEVE WESSLER ENGINEERING OF ANY RESPONSIBILITY FOR THE ACCURACY OF THE DRAWINGS.

SCALE VERIFICATION		
BAR IS ONE INCH LONG ON ORIGINAL DRAWING	DRAWN BY	JRW
	CHECKED BY	JEB
	APPROVED BY	MEC
	ISSUE DATE	SEPTEMBER 2017
	PROJECT NUMBER	196217-04-001

NO.	DATE	INITIALS	REVISION DESCRIPTIONS

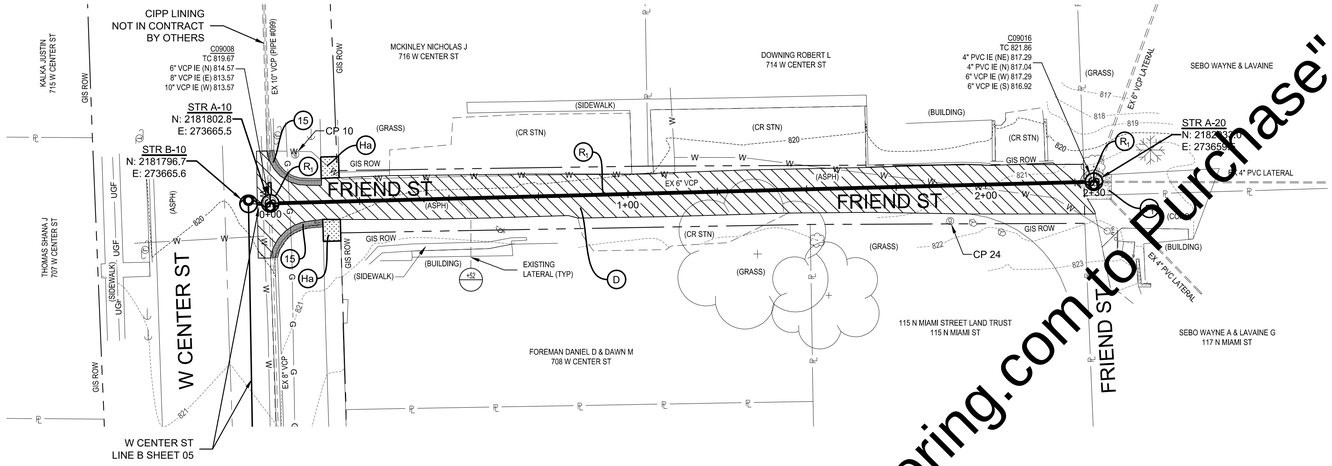
MEGAN E. CARR REGISTERED No. 10910636 STATE OF INDIANA PROFESSIONAL ENGINEER 09/07/2017
Megan E. Carr

WESSLER ENGINEERING
More than a Project™

SEWER REHABILITATION - SEWER REPLACEMENT
CITY OF WARSAW BOARD OF PUBLIC WORKS & SAFETY
WARSAW, IN

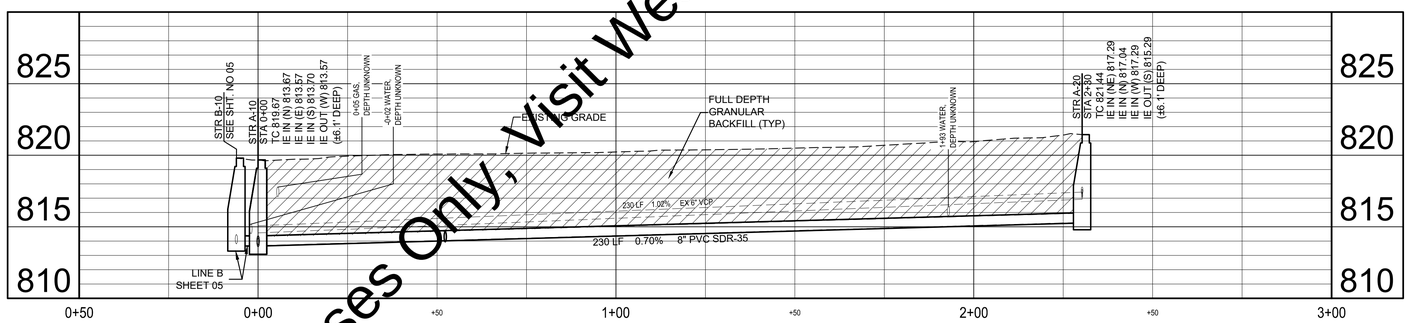
GENERAL NOTES AND ABBREVIATIONS

SHEET NO. 03
TOTAL SHEETS 20



PLAN - LINE A

0 10 20 40 FT
1"=20'



PROFILE - LINE A

HORIZ SCALE: 1" = 20'
VERT SCALE: 1" = 5'

EROSION CONTROL NOTES

1. ALL INLETS LOCATED WITHIN AND ADJACENT TO THE PROJECT LIMITS AND AT RISK TO RECEIVE CONSTRUCTION SITE STORMWATER ARE TO BE PROTECTED WITH TEMPORARY INLET PROTECTION MEASURES.
2. INSTALL INLET PROTECTION PRIOR TO CONSTRUCTION ACTIVITIES AT THE SITE.
3. LOCATE CONCRETE WASHOUT WITHIN THE CONSTRUCTION LIMITS.
4. SOIL TO BE STOCKPILED ALONG THE ROAD DURING CONSTRUCTION.
5. THE EXISTING ROADS WILL BE USED AS THE CONSTRUCTION ENTRANCE. TRACKED SEDIMENT IS TO BE REMOVED DAILY FROM ADJACENT ROADWAYS.
6. LAND DISTURBANCE AREAS ARE TO BE SEEDED AFTER CONSTRUCTION ACTIVITIES END WITHIN 15 DAYS.

NOTES

1. REPLACE 6" VCP WITH 8" SDR 35 PVC ALONG EXISTING SEWER ALIGNMENT. REPLACE 2 MANHOLES.
2. LATERAL ELEVATIONS HAVE NOT BEEN VERIFIED. THE CONTRACTOR SHALL POTHOLE AND VERIFY EACH LATERAL DEPTH AT THE EDGE OF THE RIGHT OF WAY BEFORE CONSTRUCTION OF THE MAIN AND NOTIFY ENGINEER OF ANY CONFLICTS IN RECONNECTING LATERALS TO THE NEW SEWER MAIN.
3. THE CONTRACTOR SHALL VERIFY AND RECONNECT ALL ACTIVE LATERALS AS SHOWN ON DETAIL SHEET 17. THE CONTRACTOR SHALL LOCATE ALL CAPPED/ABANDONED LATERALS AND VERIFY WITH THE CITY THAT THEY ARE NO LONGER IN USE OR NEEDED.
4. THE CONTRACTOR SHALL VERIFY ALL MANHOLE DETAILS INCLUDING SIZE, DEPTH, MATERIAL AND EXISTING CONDITIONS TO VERIFY THE PROPOSED MANHOLES AND THE MANHOLE REHABILITATION PLAN.
5. ANY SANITARY SEWER PIPE LOCATED WITHIN 10 FEET HORIZONTALLY OR 18" VERTICALLY OF WATER LINES SHALL BE SDR-21 PVC WATER GRADE PRESSURE PIPE WITHIN THESE SETBACKS. PVC GASKETED ADAPTOR COUPLING FITTINGS SHALL BE USED TO TRANSITION BACK TO SDR-35 ONCE THE PIPE IS PAST THE WATERLINE SETBACKS, UNLESS SPECIFICALLY INDICATED OTHERWISE.

KEYED NOTES

A	ABANDON PIPE SEGMENT AND FILL COMPLETELY WITH GROUT.
D	ASPHALT PAVEMENT REPAIR.
D_1	ASPHALT DRIVE REPAIR
F_1	CONCRETE DRIVE REPAIR.
F_2	CONCRETE SIDEWALK TRANSITION.
Ha	PERPENDICULAR CURB RAMP.
I	INLET PROTECTION.
R	1.5" MILL AND HMA SURFACE, TYPE B.
R_1	REMOVE PIPE/STRUCTURE COMPLETELY.
R_2	REHAB MANHOLE, SEE MANHOLE REHAB SCHEDULE, SHEET 15.
R_3	REMOVE FRAME/CASTING, ADJUSTING RINGS, CONE/FLAT TOP AS REQUIRED TO MINIMUM 24" BELOW FINISHED GRADE. FILL REMAINING STRUCTURE WITH FLOWABLE FILL AND PATCH SURFACE IN ACCORDANCE WITH PAVEMENT REPAIR DETAIL.
15	CONCRETE CURB AND GUTTER REPAIR, MATCH EXISTING.

SCALE VERIFICATION	DRAWN BY	JRW	NO.	DATE	INITIALS	REVISION DESCRIPTIONS
BAR IS ONE INCH LONG ON ORIGINAL DRAWING	CHECKED BY	JEB				
	APPROVED BY	MEC				
	ISSUE DATE	SEPTEMBER 2017				
	PROJECT NUMBER	196217-04-001				

MEGAN E. CARR — REGISTERED — No. 10910636 — STATE OF INDIANA — PROFESSIONAL ENGINEER — 09/27/2017

Megan E. Carr

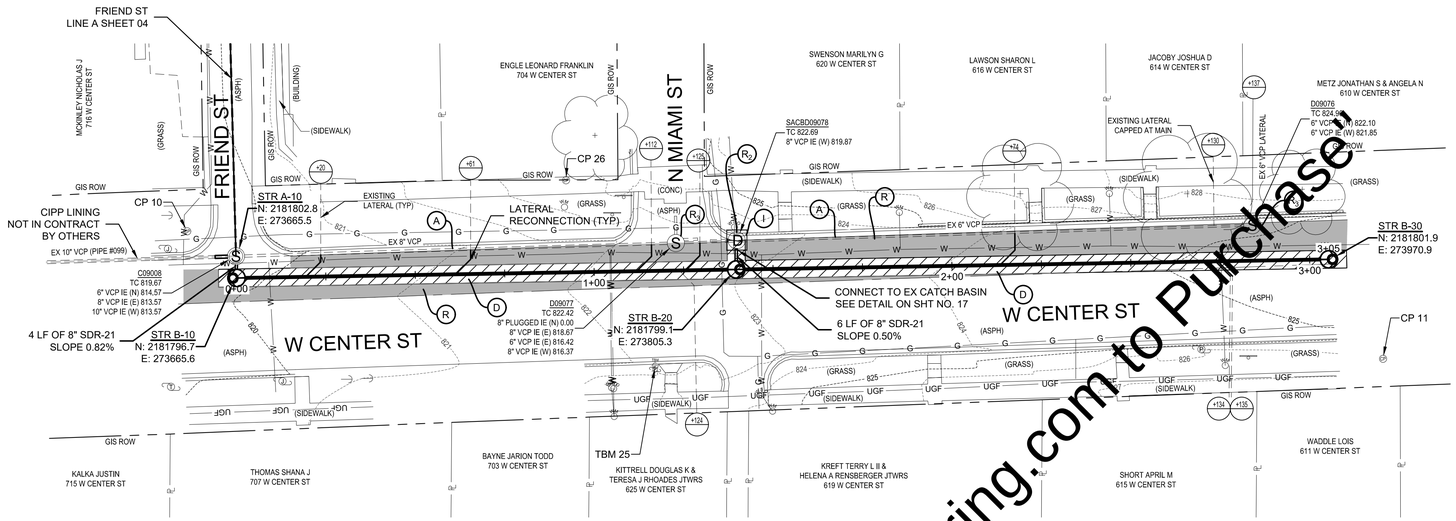
WESSLER ENGINEERING
More than a Project™

SEWER REHABILITATION - SEWER REPLACEMENT

CITY OF WARSAW BOARD OF PUBLIC WORKS & SAFETY
WARSAW, IN

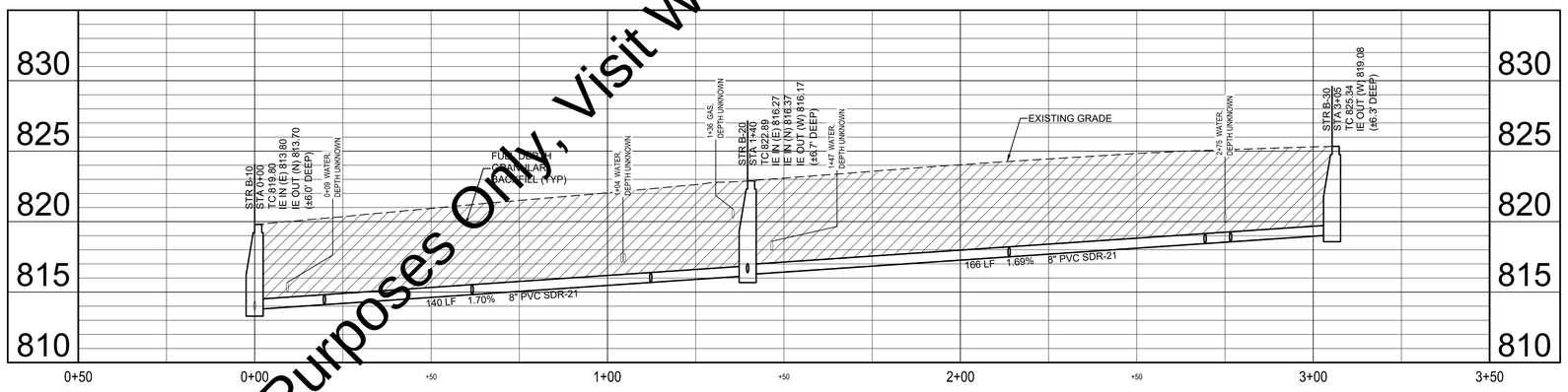
LINE A PLAN AND PROFILE - FRIEND ST, ID NO.100

SHEET NO. 04
TOTAL SHEETS 20



PLAN - LINE B

0 10 20 40 FT
1"=20'



PROFILE - LINE B

HORIZ SCALE: 1" = 20'
VERT SCALE: 1" = 5'

EROSION CONTROL NOTES

1. ALL INLETS LOCATED WITHIN AND ADJACENT TO THE PROJECT LIMITS AND AT RISK TO RECEIVE CONSTRUCTION SITE STORMWATER ARE TO BE PROTECTED WITH TEMPORARY INLET PROTECTION MEASURES.
2. INSTALL INLET PROTECTION PRIOR TO CONSTRUCTION ACTIVITIES AT THE SITE.
3. LOCATE CONCRETE WASHOUT WITHIN THE CONSTRUCTION LIMITS.
4. SOIL TO BE STOCKPILED ALONG THE ROAD DURING CONSTRUCTION.
5. THE EXISTING ROADS WILL BE USED AS THE CONSTRUCTION ENTRANCE. TRACKED SEDIMENT IS TO BE REMOVED DAILY FROM ADJACENT ROADWAYS.
6. LAND DISTURBANCE AREAS ARE TO BE SEEDED AFTER CONSTRUCTION ACTIVITIES END WITHIN 15 DAYS.

NOTES

1. REPLACE 6 & 8" VCP WITH SDR 21 PVC ALONG NEW SEWER ALIGNMENT TO THE SOUTH. REPLACE 2 MANHOLES AND 1 NEW ADDITIONAL MANHOLE.
2. LATERAL ELEVATIONS HAVE NOT BEEN VERIFIED. THE CONTRACTOR SHALL POTHOLE AND VERIFY EACH LATERAL DEPTH AT THE EDGE OF THE RIGHT OF WAY BEFORE CONSTRUCTION OF THE MAIN AND NOTIFY ENGINEER OF ANY CONFLICTS IN RECONNECTING LATERALS TO THE NEW SEWER MAIN.
3. THE CONTRACTOR SHALL VERIFY AND RECONNECT ALL ACTIVE LATERALS AS SHOWN ON DETAIL SHEET 17. THE CONTRACTOR SHALL LOCATE ALL CAPPED/ABANDONED LATERALS AND VERIFY WITH THE CITY THAT THEY ARE NO LONGER IN USE OR NEEDED.
4. THE CONTRACTOR SHALL VERIFY ALL MANHOLE DETAILS INCLUDING SIZE, DEPTH, MATERIAL AND EXISTING CONDITIONS TO VERIFY THE PROPOSED MANHOLES AND THE MANHOLE REHABILITATION PLAN.
5. ANY SANITARY SEWER PIPE LOCATED WITHIN 10 FEET HORIZONTALLY OR 18" VERTICALLY OF WATER LINES SHALL BE SDR-21 PVC WATER GRADE PRESSURE PIPE WITHIN THESE SETBACKS. PVC GASKETED ADAPTOR COUPLING FITTINGS SHALL BE USED TO TRANSITION BACK TO SDR-35 ONCE THE PIPE IS PAST THE WATERLINE SETBACKS, UNLESS SPECIFICALLY INDICATED OTHERWISE.

KEYED NOTES ◯

A	ABANDON PIPE SEGMENT AND FILL COMPLETELY WITH GROUT.
D	ASPHALT PAVEMENT REPAIR.
D_1	ASPHALT DRIVE REPAIR
F_1	CONCRETE DRIVE REPAIR.
F_2	CONCRETE SIDEWALK TRANSITION.
Ha	PERPENDICULAR CURB RAMP.
I	INLET PROTECTION.
R	1.5" MILL AND HMA SURFACE, TYPE B.
R_1	REMOVE PIPE/STRUCTURE COMPLETELY.
R_2	REHAB MANHOLE, SEE MANHOLE REHAB SCHEDULE, SHEET 15.
R_3	REMOVE FRAME/CASTING, ADJUSTING RINGS, CONE/FLAT TOP AS REQUIRED TO MINIMUM 24" BELOW FINISHED GRADE. FILL REMAINING STRUCTURE WITH FLOWABLE FILL AND PATCH SURFACE IN ACCORDANCE WITH PAVEMENT REPAIR DETAIL.
15	CONCRETE CURB AND GUTTER REPAIR, MATCH EXISTING.

SCALE VERIFICATION	DRAWN BY	JRW	NO.	DATE	INITIALS	REVISION DESCRIPTIONS	
BAR IS ONE INCH LONG ON ORIGINAL DRAWING	CHECKED BY	JEB					
	APPROVED BY	MEC					
	ISSUE DATE	SEPTEMBER 2017					
	PROJECT NUMBER	196217-04-001					

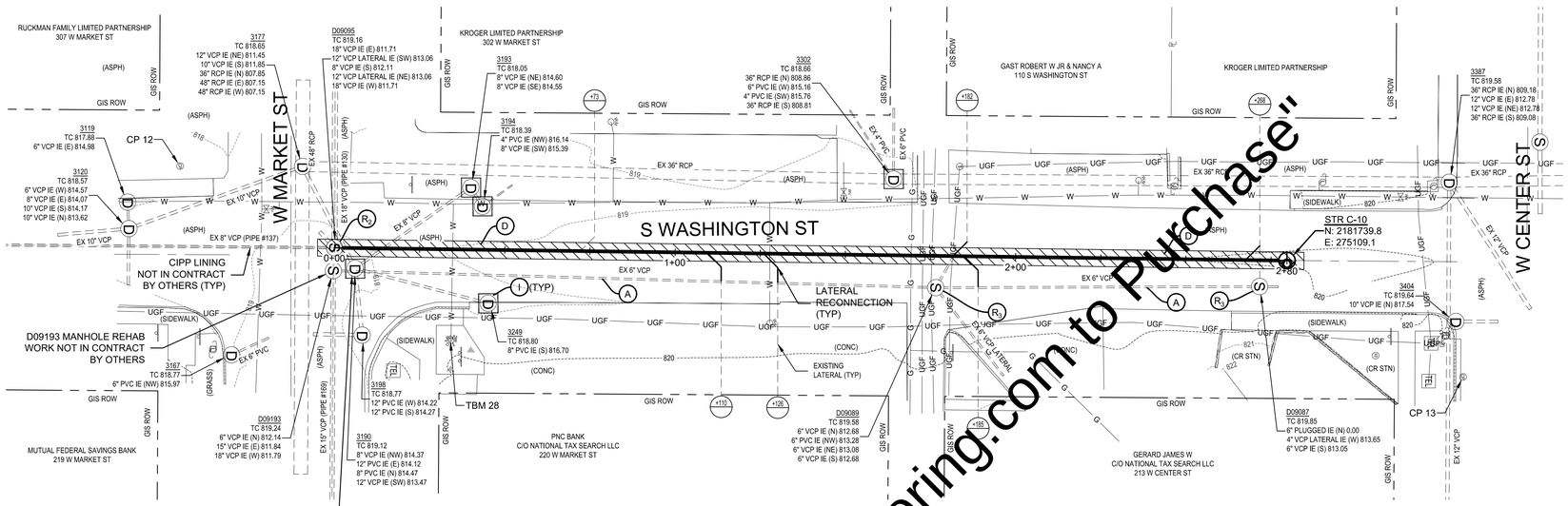
MEGAN E. CARR REGISTERED No. 10910636 STATE OF INDIANA PROFESSIONAL ENGINEER 09/27/2017
Megan E. Carr

WESSLER ENGINEERING
More than a Project™

SEWER REHABILITATION - SEWER REPLACEMENT
CITY OF WARSAW BOARD OF PUBLIC WORKS & SAFETY
WARSAW, IN

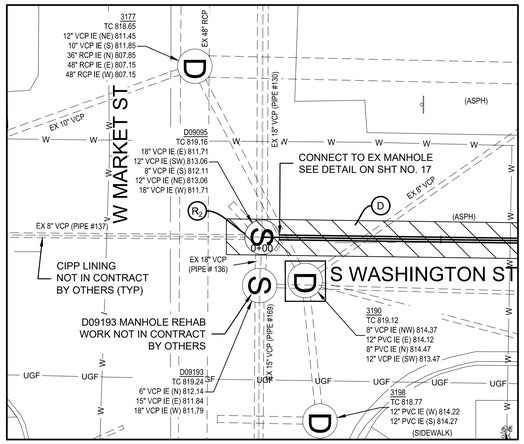
LINE B PLAN AND PLAN AND PROFILE - W CENTER ST, ID NO. 101, 103

SHEET NO. 05
TOTAL SHEETS 20



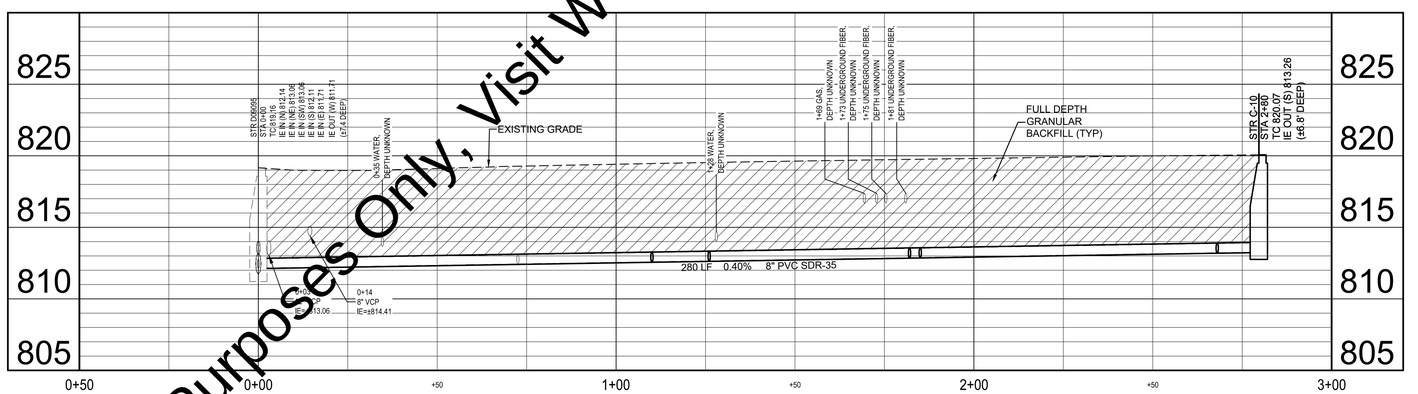
PLAN - LINE C

0 10 40 FT
1"=20'



INTERSECTION BLOWUP

0 5 10 20 FT
1"=10'



PROFILE - LINE C

HORIZ SCALE: 1" = 20'
VERT SCALE: 1" = 5'

EROSION CONTROL NOTES

1. ALL INLETS LOCATED WITHIN AND ADJACENT TO THE PROJECT LIMITS AND AT RISK TO RECEIVE CONSTRUCTION SITE STORMWATER ARE TO BE PROTECTED WITH TEMPORARY INLET PROTECTION MEASURES.
2. INSTALL INLET PROTECTION PRIOR TO CONSTRUCTION ACTIVITIES AT THE SITE.
3. LOCATE CONCRETE WASHOUT WITHIN THE CONSTRUCTION LIMITS.
4. SOIL TO BE STOCKPILED ALONG THE ROAD DURING CONSTRUCTION.
5. THE EXISTING ROADS WILL BE USED AS THE CONSTRUCTION ENTRANCE. TRACKED SEDIMENT IS TO BE REMOVED DAILY FROM ADJACENT ROADWAYS.
6. LAND DISTURBANCE AREAS ARE TO BE SEEDED AFTER CONSTRUCTION ACTIVITIES END WITHIN 15 DAYS.

NOTES

1. REPLACE 6" VCP WITH 8" SDR 35 PVC ALONG NEW SEWER ALIGNMENT TO THE NORTH, CONNECTING INTO EXISTING MH D09095. REPLACE 1 MANHOLE . ABANDON 2 MANHOLES.
2. LATERAL ELEVATIONS HAVE NOT BEEN VERIFIED. THE CONTRACTOR SHALL POTHOLE AND VERIFY EACH LATERAL DEPTH AT THE EDGE OF THE RIGHT OF WAY BEFORE CONSTRUCTION OF THE MAIN AND NOTIFY ENGINEER OF ANY CONFLICTS IN RECONNECTING LATERALS TO THE NEW SEWER MAIN.
3. THE CONTRACTOR SHALL VERIFY AND RECONNECT ALL ACTIVE LATERALS AS SHOWN ON DETAIL SHEET 17. THE CONTRACTOR SHALL LOCATE ALL CAPPED/ABANDONED LATERALS AND VERIFY WITH THE CITY THAT THEY ARE NO LONGER IN USE OR NEEDED.
4. THE CONTRACTOR SHALL VERIFY ALL MANHOLE DETAILS INCLUDING SIZE, DEPTH, MATERIAL AND EXISTING CONDITIONS TO VERIFY THE PROPOSED MANHOLES AND THE MANHOLE REHABILITATION PLAN.
5. ANY SANITARY SEWER PIPE LOCATED WITHIN 10 FEET HORIZONTALLY OR 18" VERTICALLY OF WATER LINES SHALL BE SDR-21 PVC WATER GRADE PRESSURE PIPE WITHIN THESE SETBACKS. PVC GASKETED ADAPTOR COUPLING FITTINGS SHALL BE USED TO TRANSITION BACK TO SDR-35 ONCE THE PIPE IS PAST THE WATERLINE SETBACKS, UNLESS SPECIFICALLY INDICATED OTHERWISE.

KEYED NOTES

A	ABANDON PIPE SEGMENT AND FILL COMPLETELY WITH GROUT.
D	ASPHALT PAVEMENT REPAIR.
D_1	ASPHALT DRIVE REPAIR
F_1	CONCRETE DRIVE REPAIR.
F_2	CONCRETE SIDEWALK TRANSITION.
Ha	PERPENDICULAR CURB RAMP.
I	INLET PROTECTION.
R	1.5" MILL AND HMA SURFACE, TYPE B.
R_1	REMOVE PIPE/STRUCTURE COMPLETELY.
R_2	REHAB MANHOLE, SEE MANHOLE REHAB SCHEDULE, SHEET 15.
R_3	REMOVE FRAME/CASTING, ADJUSTING RINGS, CONE/FLAT TOP AS REQUIRED TO MINIMUM 24" BELOW FINISHED GRADE. FILL REMAINING STRUCTURE WITH FLOWABLE FILL AND PATCH SURFACE IN ACCORDANCE WITH PAVEMENT REPAIR DETAIL.
15	CONCRETE CURB AND GUTTER REPAIR, MATCH EXISTING.

SCALE VERIFICATION	DRAWN BY	JRW	NO.	DATE	INITIALS	REVISION DESCRIPTIONS
BAR IS ONE INCH LONG ON ORIGINAL DRAWING	CHECKED BY	JEB				
	APPROVED BY	MEC				
	ISSUE DATE	SEPTEMBER 2017				
	PROJECT NUMBER	196217-04-001				

MEGAN E. CARR REGISTERED No. 10910636 STATE OF INDIANA PROFESSIONAL ENGINEER 09/27/2017
Megan E. Carr

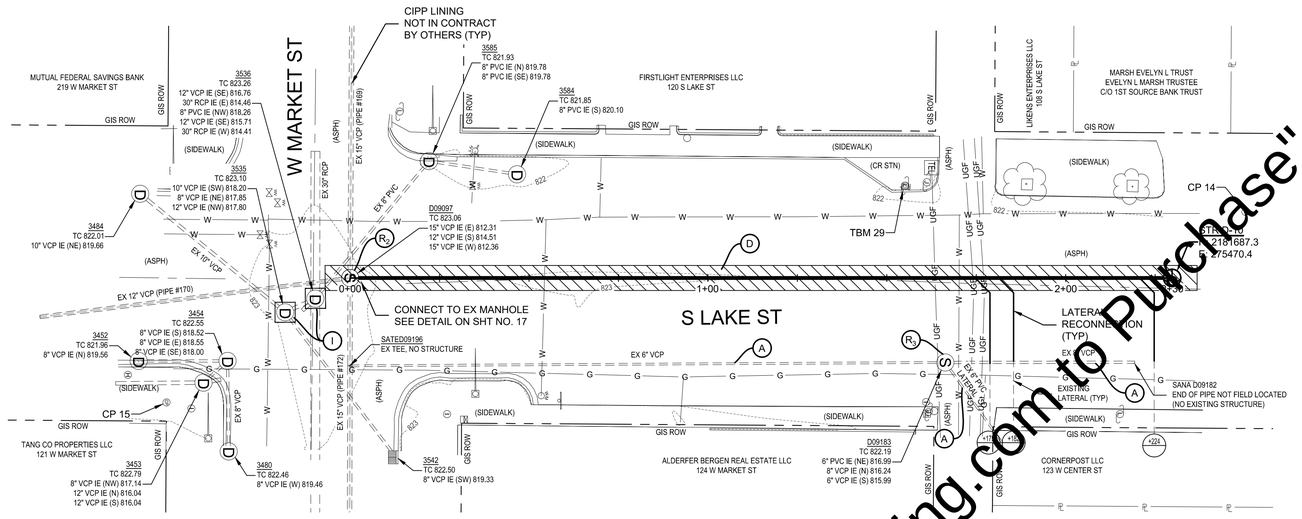
WESSLER ENGINEERING
More than a Project™

SEWER REHABILITATION - SEWER REPLACEMENT

CITY OF WARSAW BOARD OF PUBLIC WORKS & SAFETY
WARSAW, IN

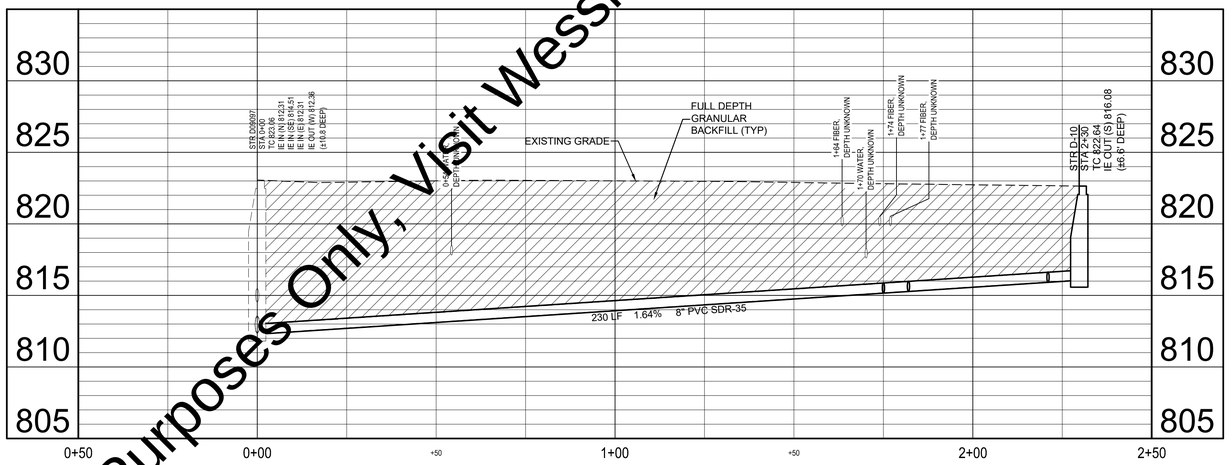
LINE C PLAN AND PROFILE - S WASHINGTON ST, ID NO. 134, 135

SHEET NO. 06
TOTAL SHEETS 20



PLAN - LINE D

0 10 20 40 FT
1"=20'



PROFILE - LINE D

HORIZ SCALE: 1" = 20'
VERT SCALE: 1" = 5'

EROSION CONTROL NOTES

1. ALL INLETS LOCATED WITHIN AND ADJACENT TO THE PROJECT LIMITS AND AT RISK TO RECEIVE CONSTRUCTION SITE STORMWATER ARE TO BE PROTECTED WITH TEMPORARY INLET PROTECTION MEASURES.
2. INSTALL INLET PROTECTION PRIOR TO CONSTRUCTION ACTIVITIES AT THE SITE.
3. LOCATE CONCRETE WASHOUT WITHIN THE CONSTRUCTION LIMITS.
4. SOIL TO BE STOCKPILED ALONG THE ROAD DURING CONSTRUCTION.
5. THE EXISTING ROADS WILL BE USED AS THE CONSTRUCTION ENTRANCE. TRACKED SEDIMENT IS TO BE REMOVED DAILY FROM ADJACENT ROADWAYS.
6. LAND DISTURBANCE AREAS ARE TO BE SEEDED AFTER CONSTRUCTION ACTIVITIES END WITHIN 15 DAYS.

NOTES

1. REPLACE 6" WITH 8" SDR 35 PVC VCP ALONG NEW SEWER ALIGNMENT TO THE NORTH, CONNECTING TO EXISTING MH D09097. MOVE AND REPLACE MANHOLE AT END OF SEWER. ABANDON 1 MANHOLE.
2. LATERAL ELEVATIONS HAVE NOT BEEN VERIFIED. THE CONTRACTOR SHALL POTHOLE AND VERIFY EACH LATERAL DEPTH AT THE EDGE OF THE RIGHT OF WAY BEFORE CONSTRUCTION OF THE MAIN AND NOTIFY ENGINEER OF ANY CONFLICTS IN RECONNECTING LATERALS TO THE NEW SEWER MAIN.
3. THE CONTRACTOR SHALL VERIFY AND RECONNECT ALL ACTIVE LATERALS AS SHOWN ON DETAIL SHEET 17. THE CONTRACTOR SHALL LOCATE ALL CAPPED/ABANDONED LATERALS AND VERIFY WITH THE CITY THAT THEY ARE NO LONGER IN USE OR NEEDED.
4. THE CONTRACTOR SHALL VERIFY ALL MANHOLE DETAILS INCLUDING SIZE, DEPTH, MATERIAL AND EXISTING CONDITIONS TO VERIFY THE PROPOSED MANHOLES AND THE MANHOLE REHABILITATION PLAN.
5. ANY SANITARY SEWER PIPE LOCATED WITHIN 10 FEET HORIZONTALLY OR 18" VERTICALLY OF WATER LINES SHALL BE SDR-21 PVC WATER GRADE PRESSURE PIPE WITHIN THESE SETBACKS. PVC GASKETED ADAPTOR COUPLING FITTINGS SHALL BE USED TO TRANSITION BACK TO SDR-35 ONCE THE PIPE IS PAST THE WATERLINE SETBACKS, UNLESS SPECIFICALLY INDICATED OTHERWISE.

KEYED NOTES ◯

A	ABANDON PIPE SEGMENT AND FILL COMPLETELY WITH GROUT.
D	ASPHALT PAVEMENT REPAIR.
D_1	ASPHALT DRIVE REPAIR
F_1	CONCRETE DRIVE REPAIR.
F_2	CONCRETE SIDEWALK TRANSITION.
Ha	PERPENDICULAR CURB RAMP.
I	INLET PROTECTION.
R	1.5" MILL AND HMA SURFACE, TYPE B.
R_1	REMOVE PIPE/STRUCTURE COMPLETELY.
R_2	REHAB MANHOLE, SEE MANHOLE REHAB SCHEDULE, SHEET 15.
R_3	REMOVE FRAME/CASTING, ADJUSTING RINGS, CONE/FLAT TOP AS REQUIRED TO MINIMUM 24" BELOW FINISHED GRADE. FILL REMAINING STRUCTURE WITH FLOWABLE FILL AND PATCH SURFACE IN ACCORDANCE WITH PAVEMENT REPAIR DETAIL.
15	CONCRETE CURB AND GUTTER REPAIR, MATCH EXISTING.

SCALE VERIFICATION	DRAWN BY	JRW	NO.	DATE	INITIALS	REVISION DESCRIPTIONS	
BAR IS ONE INCH LONG ON ORIGINAL DRAWING	CHECKED BY	JEB					
	APPROVED BY	MEC					
	ISSUE DATE	SEPTEMBER 2017					
	PROJECT NUMBER	196217-04-001					

MEGAN E. CARR REGISTERED No. 10910636 STATE OF INDIANA PROFESSIONAL ENGINEER 09/27/2017
Megan E. Carr

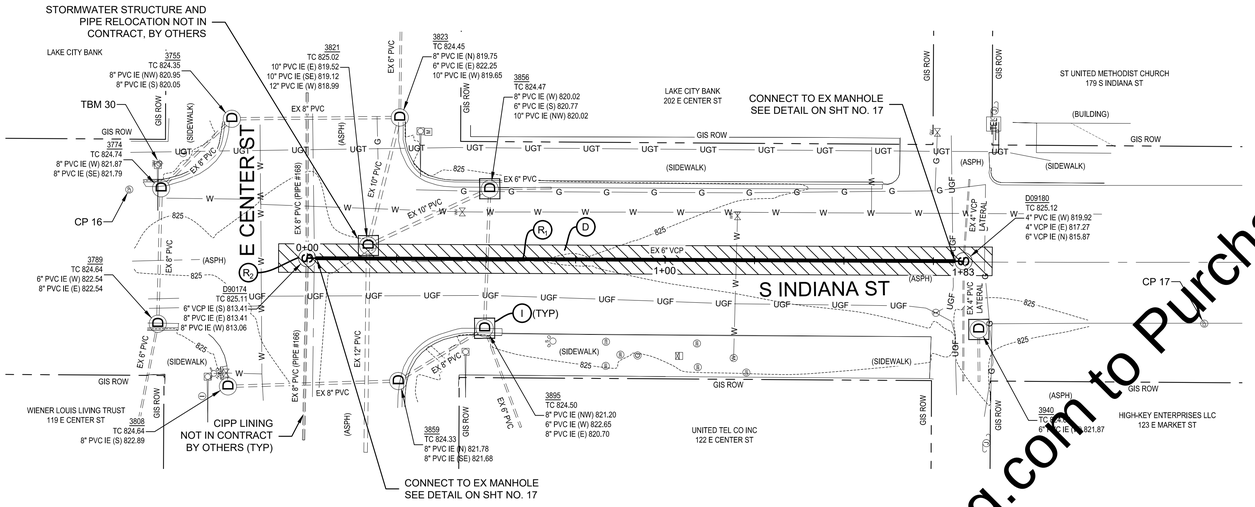
WESSLER ENGINEERING
More than a Project™

SEWER REHABILITATION - SEWER REPLACEMENT

CITY OF WARSAW BOARD OF PUBLIC WORKS & SAFETY
WARSAW, IN

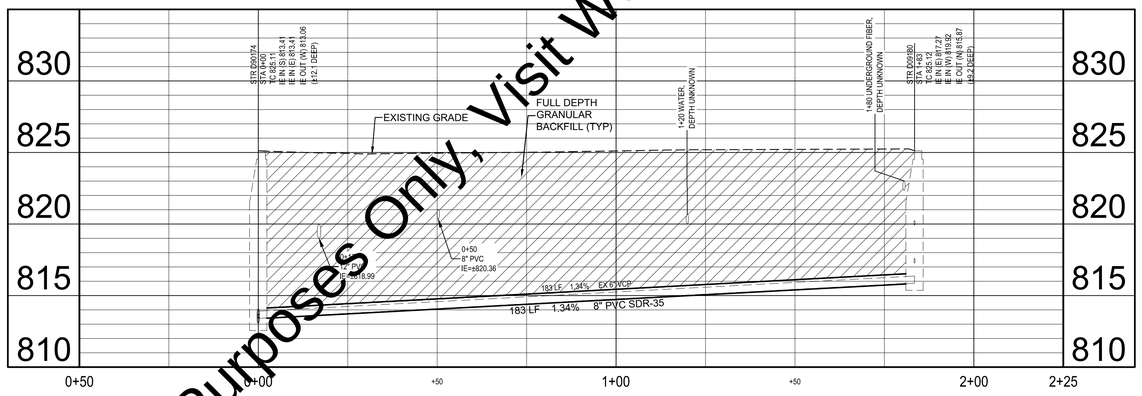
LINE D PLAN AND PROFILE - S LAKE ST, ID NO. 173, 174

SHEET NO. 07
TOTAL SHEETS 20



PLAN - LINE E

0 10 20 40 FT
1"=20'



PROFILE - LINE E

HORIZ SCALE: 1" = 20'
VERT SCALE: 1" = 5'

EROSION CONTROL NOTES

1. ALL INLETS LOCATED WITHIN AND ADJACENT TO THE PROJECT LIMITS AND AT RISK TO RECEIVE CONSTRUCTION SITE STORMWATER ARE TO BE PROTECTED WITH TEMPORARY INLET PROTECTION MEASURES.
2. INSTALL INLET PROTECTION PRIOR TO CONSTRUCTION ACTIVITIES AT THE SITE.
3. LOCATE CONCRETE WASHOUT WITHIN THE CONSTRUCTION LIMITS.
4. SOIL TO BE STOCKPILED ALONG THE ROAD DURING CONSTRUCTION.
5. THE EXISTING ROADS WILL BE USED AS THE CONSTRUCTION ENTRANCE. TRACKED SEDIMENT IS TO BE REMOVED DAILY FROM ADJACENT ROADWAYS.
6. LAND DISTURBANCE AREAS ARE TO BE SEEDED AFTER CONSTRUCTION ACTIVITIES END WITHIN 15 DAYS.

NOTES

1. REPLACE 6" VCP WITH 8" SDR 35 PVC ALONG EXISTING SEWER ALIGNMENT. REHAB 1 MANHOLE.
2. LATERAL ELEVATIONS HAVE NOT BEEN VERIFIED. THE CONTRACTOR SHALL POTHOLE AND VERIFY EACH LATERAL DEPT AT THE EDGE OF THE RIGHT OF WAY BEFORE CONSTRUCTION OF THE MAIN AND NOTIFY ENGINEER OF ANY CONFLICTS IN RECONNECTING LATERALS TO THE NEW SEWER MAIN.
3. THE CONTRACTOR SHALL VERIFY AND RECONNECT ALL ACTIVE LATERALS AS SHOWN ON DETAIL SHEET 17. THE CONTRACTOR SHALL LOCATE ALL CAPPED/ABANDONED LATERALS AND VERIFY WITH THE CITY THAT THEY ARE NO LONGER IN USE OR NEEDED.
4. THE CONTRACTOR SHALL VERIFY ALL MANHOLE DETAILS INCLUDING SIZE, DEPTH, MATERIAL AND EXISTING CONDITIONS TO VERIFY THE PROPOSED MANHOLES AND THE MANHOLE REHABILITATION PLAN.
5. ANY SANITARY SEWER PIPE LOCATED WITHIN 10 FEET HORIZONTALLY OR 18" VERTICALLY OF WATER LINES SHALL BE SDR-21 PVC WATER GRADE PRESSURE PIPE WITHIN THESE SETBACKS. PVC GASKETED ADAPTOR COUPLING FITTINGS SHALL BE USED TO TRANSITION BACK TO SDR-35 ONCE THE PIPE IS PAST THE WATERLINE SETBACKS, UNLESS SPECIFICALLY INDICATED OTHERWISE.

KEYED NOTES

A	ABANDON PIPE SEGMENT AND FILL COMPLETELY WITH GROUT.
D	ASPHALT PAVEMENT REPAIR.
D_1	ASPHALT DRIVE REPAIR
F_1	CONCRETE DRIVE REPAIR.
F_2	CONCRETE SIDEWALK TRANSITION.
Ha	PERPENDICULAR CURB RAMP.
I	INLET PROTECTION.
R	1.5" MILL AND HMA SURFACE, TYPE B.
R_1	REMOVE PIPE/STRUCTURE COMPLETELY.
R_2	REHAB MANHOLE, SEE MANHOLE REHAB SCHEDULE, SHEET 15.
R_3	REMOVE FRAME/CASTING, ADJUSTING RINGS, CONE/FLAT TOP AS REQUIRED TO MINIMUM 24" BELOW FINISHED GRADE. FILL REMAINING STRUCTURE WITH FLOWABLE FILL AND PATCH SURFACE IN ACCORDANCE WITH PAVEMENT REPAIR DETAIL.
15	CONCRETE CURB AND GUTTER REPAIR, MATCH EXISTING.

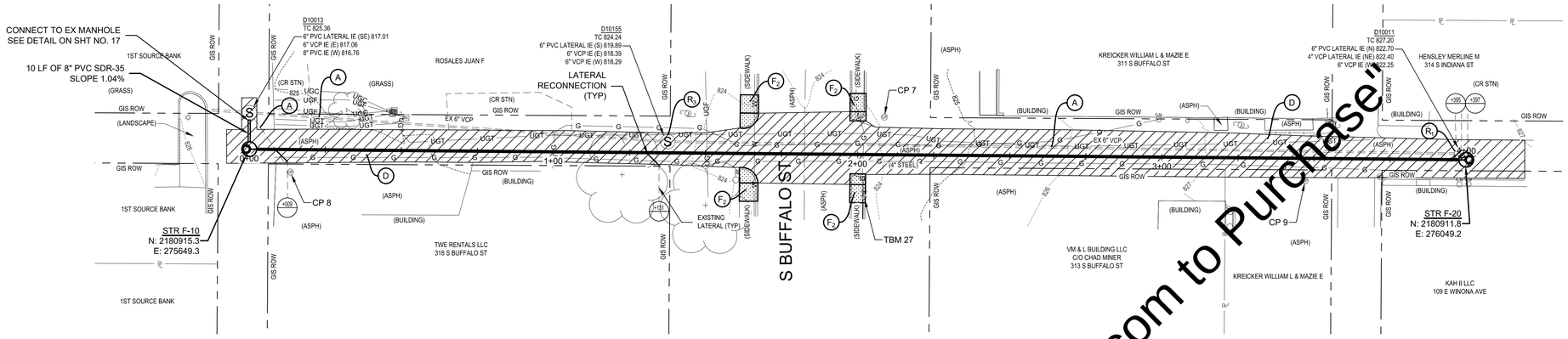
SCALE VERIFICATION	DRAWN BY	JRW	NO.	DATE	INITIALS	REVISION DESCRIPTIONS	MEGAN E. CARR REGISTERED No. 10910636 STATE OF INDIANA PROFESSIONAL ENGINEER 09/27/2017 Megan E. Carr
BAR IS ONE INCH LONG ON ORIGINAL DRAWING	CHECKED BY	JEB					WESSLER ENGINEERING More than a Project™
	APPROVED BY	MEC					
	ISSUE DATE	SEPTEMBER 2017					
	PROJECT NUMBER	196217-04-001					

SEWER REHABILITATION - SEWER REPLACEMENT

CITY OF WARSAW BOARD OF PUBLIC WORKS & SAFETY
WARSAW, IN

LINE E PLAN AND PROFILE - S INDIANA ST, ID NO. 167

SHEET NO. 08
TOTAL SHEETS 20



PLAN - LINE F

0 10 20 40 FT

1"=20'

NOTES

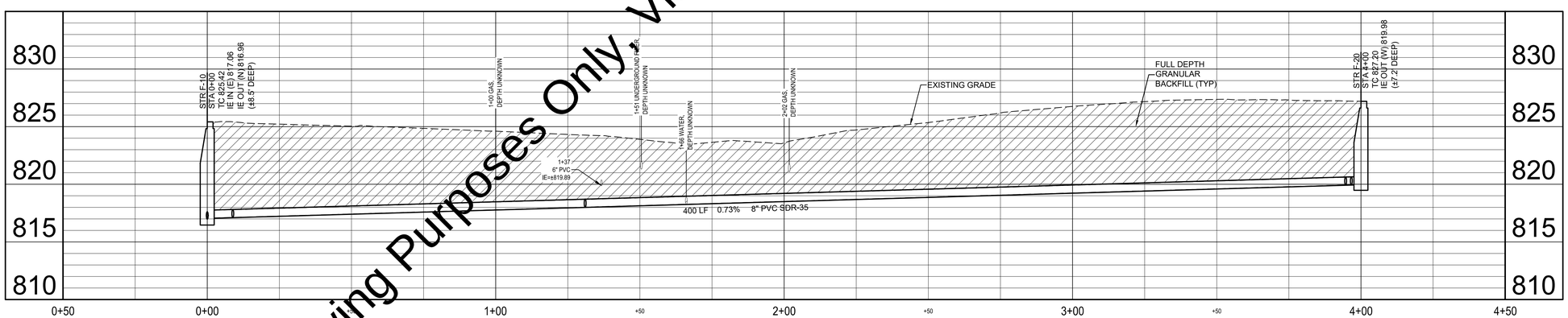
1. REPLACE 6" VCP WITH 8" SDR 35 PVC ALONG NEW SEWER ALIGNMENT CONNECTING TO NEW MH SOUTH OF D10013, REPLACE MANHOLE AT END OF SEWER. ABANDON 1 MANHOLE.
2. INCOMPLETE VIDEO, NOT COMPLETE LATERAL INFORMATION VERIFY AND REINSTATE ALL LATERALS.
3. LATERAL ELEVATIONS HAVE NOT BEEN VERIFIED. THE CONTRACTOR SHALL POTHOLE AND VERIFY EACH LATERAL DEPTH AT THE EDGE OF THE RIGHT OF WAY BEFORE CONSTRUCTION OF THE MAIN AND NOTIFY ENGINEER OF ANY CONFLICTS IN RECONNECTING LATERALS TO THE NEW SEWER MAIN.
4. THE CONTRACTOR SHALL VERIFY AND RECONNECT ALL ACTIVE LATERALS AS SHOWN ON DETAIL SHEET 17. THE CONTRACTOR SHALL LOCATE ALL CAPPED/ABANDONED LATERALS AND VERIFY WITH THE CITY THAT THEY ARE NO LONGER IN USE OR NEEDED.
5. THE CONTRACTOR SHALL VERIFY ALL MANHOLE DETAILS INCLUDING SIZE, DEPTH, MATERIAL AND EXISTING CONDITIONS TO VERIFY THE PROPOSED MANHOLES AND THE MANHOLE REHABILITATION PLAN.
6. ANY SANITARY SEWER PIPE LOCATED WITHIN 10 FEET HORIZONTALLY OR 18" VERTICALLY OF WATER LINES SHALL BE SDR-21 PVC WATER GRADE PRESSURE PIPE WITHIN THESE SETBACKS. PVC GASKETED ADAPTOR COUPLING FITTINGS SHALL BE USED TO TRANSITION BACK TO SDR-35 ONCE THE PIPE IS PAST THE WATERLINE SETBACKS, UNLESS SPECIFICALLY INDICATED OTHERWISE.

EROSION CONTROL NOTES

1. ALL INLETS LOCATED WITHIN AND ADJACENT TO THE PROJECT LIMITS AND AT RISK TO RECEIVE CONSTRUCTION SITE STORMWATER ARE TO BE PROTECTED WITH TEMPORARY INLET PROTECTION MEASURES.
2. INSTALL INLET PROTECTION PRIOR TO CONSTRUCTION ACTIVITIES AT THE SITE.
3. LOCATE CONCRETE WASHOUT WITHIN THE CONSTRUCTION LIMITS.
4. SOIL TO BE STOCKPILED ALONG THE ROAD DURING CONSTRUCTION.
5. THE EXISTING ROADS WILL BE USED AS THE CONSTRUCTION ENTRANCE. TRACKED SEDIMENT IS TO BE REMOVED DAILY FROM ADJACENT ROADWAYS.
6. LAND DISTURBANCE AREAS ARE TO BE SEEDED AFTER CONSTRUCTION ACTIVITIES END WITHIN 15 DAYS.

KEYED NOTES

A	ABANDON PIPE SEGMENT AND FILL COMPLETELY WITH GROUT.
D	ASPHALT PAVEMENT REPAIR.
D_1	ASPHALT DRIVE REPAIR
F_1	CONCRETE DRIVE REPAIR.
F_2	CONCRETE SIDEWALK TRANSITION.
Ha	PERPENDICULAR CURB RAMP.
I	INLET PROTECTION.
R	1.5" MILL AND HMA SURFACE, TYPE B.
R_1	REMOVE PIPE/STRUCTURE COMPLETELY.
R_2	REHAB MANHOLE, SEE MANHOLE REHAB SCHEDULE, SHEET 15.
R_3	REMOVE FRAME/CASTING, ADJUSTING RINGS, CONE/FLAT TOP AS REQUIRED TO MINIMUM 24" BELOW FINISHED GRADE. FILL REMAINING STRUCTURE WITH FLOWABLE FILL AND PATCH SURFACE IN ACCORDANCE WITH PAVEMENT REPAIR DETAIL.
15	CONCRETE CURB AND GUTTER REPAIR, MATCH EXISTING.



PROFILE - LINE F

HORIZ SCALE: 1" = 20'

VERT SCALE: 1" = 5'

SCALE VERIFICATION	DRAWN BY	JRW	NO.	DATE	INITIALS	REVISION DESCRIPTIONS
BAR IS ONE INCH LONG ON ORIGINAL DRAWING	CHECKED BY	JEB				
	APPROVED BY	MEC				
	ISSUE DATE	SEPTEMBER 2017				
	PROJECT NUMBER	196217-04-001				

MEGAN E. CARR REGISTERED No. 10910636 STATE OF INDIANA PROFESSIONAL ENGINEER 09/27/2017

Megan E. Carr

WESSLER ENGINEERING

More than a Project™

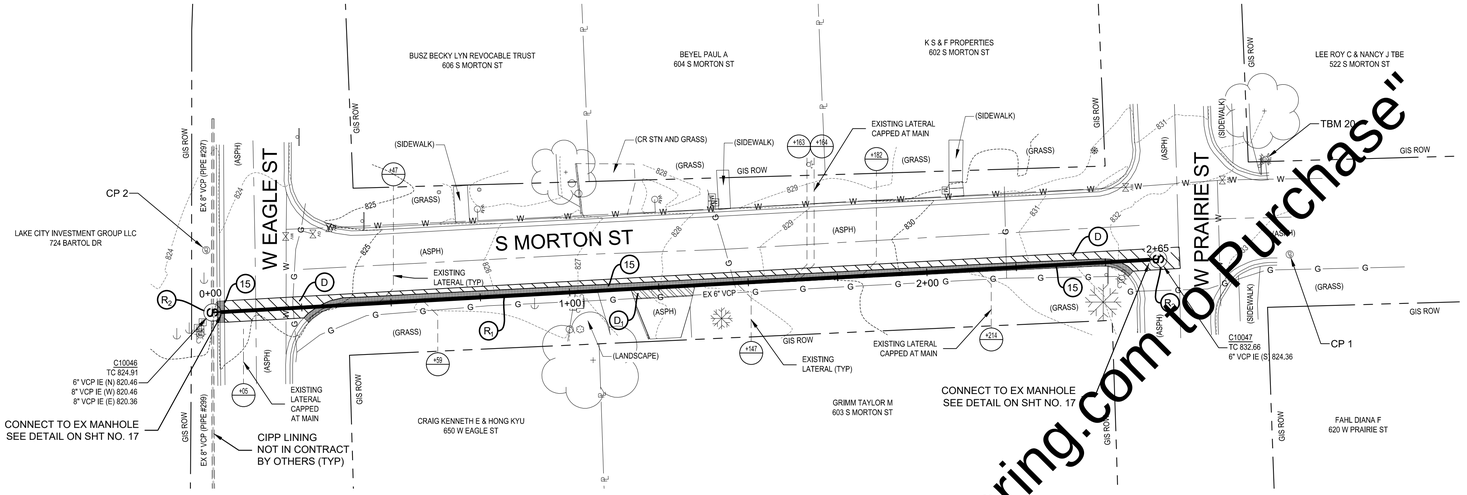
SEWER REHABILITATION - SEWER REPLACEMENT

CITY OF WARSAW BOARD OF PUBLIC WORKS & SAFETY
WARSAW, IN

LINE F PLAN AND PROFILE - S BUFFALO ST, ID NO. 356, 357

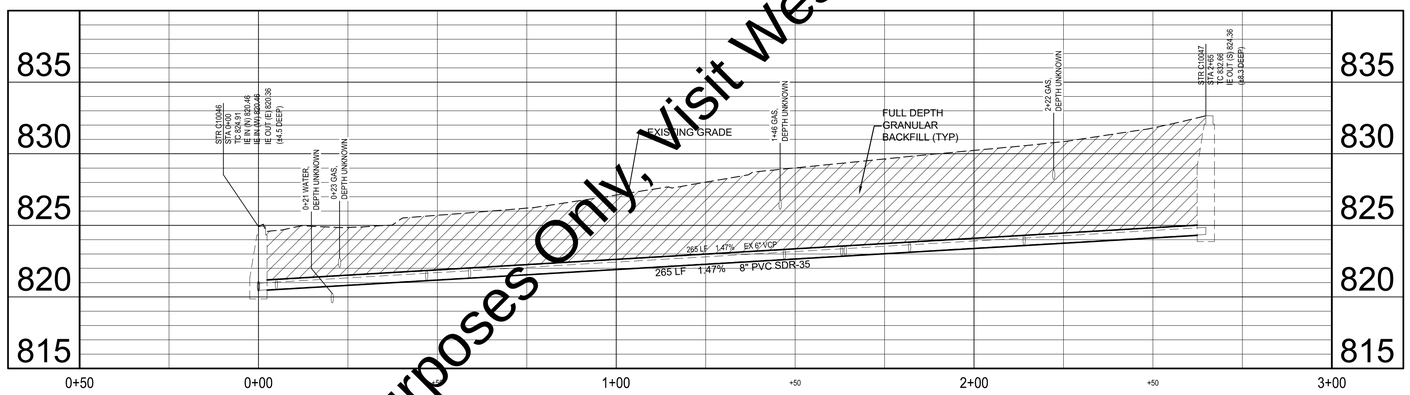
SHEET NO. 09

TOTAL SHEETS 20



PLAN - LINE G

0 10 20 40 FT



PROFILE - LINE G

HORIZ SCALE: 1" = 20'

VERT SCALE: 1" = 5'

EROSION CONTROL NOTES

1. ALL INLETS LOCATED WITHIN AND ADJACENT TO THE PROJECT LIMITS AND AT RISK TO RECEIVE CONSTRUCTION SITE STORMWATER ARE TO BE PROTECTED WITH TEMPORARY INLET PROTECTION MEASURES.
2. INSTALL INLET PROTECTION PRIOR TO CONSTRUCTION ACTIVITIES AT THE SITE.
3. LOCATE CONCRETE WASHOUT WITHIN THE CONSTRUCTION LIMITS.
4. SOIL TO BE STOCKPILED ALONG THE ROAD DURING CONSTRUCTION.
5. THE EXISTING ROADS WILL BE USED AS THE CONSTRUCTION ENTRANCE. TRACKED SEDIMENT IS TO BE REMOVED DAILY FROM ADJACENT ROADWAYS.
6. LAND DISTURBANCE AREAS ARE TO BE SEEDED AFTER CONSTRUCTION ACTIVITIES END WITHIN 15 DAYS.

NOTES

1. REPLACE 6" VCP WITH 8" SDR 35 PVC ALONG EXISTING SEWER ALIGNMENT. REHAB 2 MANHOLES.
2. LATERAL ELEVATIONS HAVE NOT BEEN VERIFIED. THE CONTRACTOR SHALL POTHOLE AND VERIFY EACH LATERAL DEPTH AT THE EDGE OF THE RIGHT OF WAY BEFORE CONSTRUCTION OF THE MAIN AND NOTIFY ENGINEER OF ANY CONFLICTS IN RECONNECTING LATERALS TO THE NEW SEWER MAIN.
3. THE CONTRACTOR SHALL VERIFY AND RECONNECT ALL ACTIVE LATERALS AS SHOWN ON DETAIL SHEET 17. THE CONTRACTOR SHALL LOCATE ALL CAPPED/ABANDONED LATERALS AND VERIFY WITH THE CITY THAT THEY ARE NO LONGER IN USE OR NEEDED.
4. THE CONTRACTOR SHALL VERIFY ALL MANHOLE DETAILS INCLUDING SIZE, DEPTH, MATERIAL AND EXISTING CONDITIONS TO VERIFY THE PROPOSED MANHOLES AND THE MANHOLE REHABILITATION PLAN.
5. ANY SANITARY SEWER PIPE LOCATED WITHIN 10 FEET HORIZONTALLY OR 18" VERTICALLY OF WATER LINES SHALL BE SDR-21 PVC WATER GRADE PRESSURE PIPE WITHIN THESE SETBACKS. PVC GASKETED ADAPTOR COUPLING FITTINGS SHALL BE USED TO TRANSITION BACK TO SDR-35 ONCE THE PIPE IS PAST THE WATERLINE SETBACKS, UNLESS SPECIFICALLY INDICATED OTHERWISE.

KEYED NOTES○

A	ABANDON PIPE SEGMENT AND FILL COMPLETELY WITH GROUT.
D	ASPHALT PAVEMENT REPAIR.
D_1	ASPHALT DRIVE REPAIR
F_1	CONCRETE DRIVE REPAIR.
F_2	CONCRETE SIDEWALK TRANSITION.
Ha	PERPENDICULAR CURB RAMP.
I	INLET PROTECTION.
R	1.5" MILL AND HMA SURFACE, TYPE B.
R_1	REMOVE PIPE/STRUCTURE COMPLETELY.
R_2	REHAB MANHOLE, SEE MANHOLE REHAB SCHEDULE, SHEET 15.
R_3	REMOVE FRAME/CASTING, ADJUSTING RINGS, CONE/FLAT TOP AS REQUIRED TO MINIMUM 24" BELOW FINISHED GRADE. FILL REMAINING STRUCTURE WITH FLOWABLE FILL AND PATCH SURFACE IN ACCORDANCE WITH PAVEMENT REPAIR DETAIL.
15	CONCRETE CURB AND GUTTER REPAIR, MATCH EXISTING.

SCALE VERIFICATION	DRAWN BY	JRW
BAR IS ONE INCH LONG ON ORIGINAL DRAWING	CHECKED BY	JEB
	APPROVED BY	MEC
	ISSUE DATE	SEPTEMBER 2017
	PROJECT NUMBER	196217-04-001

NO.	DATE	INITIALS	REVISION DESCRIPTIONS

MEGAN E. CARR REGISTERED No. 10910636 STATE OF INDIANA PROFESSIONAL ENGINEER 09/27/2017

Megan E. Carr

WESSLER ENGINEERING
More than a Project™

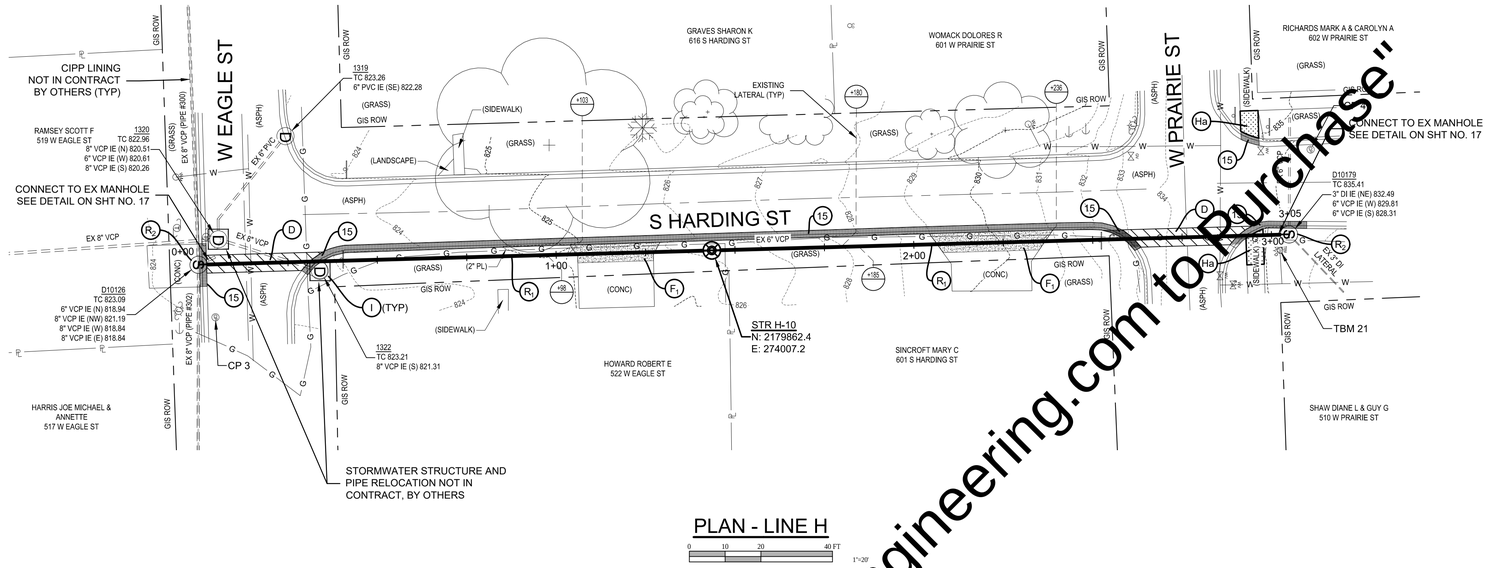
SEWER REHABILITATION - SEWER REPLACEMENT

CITY OF WARSAW BOARD OF PUBLIC WORKS & SAFETY
WARSAW, IN

LINE G PLAN AND PROFILE - S MORTON ST, ID NO. 298

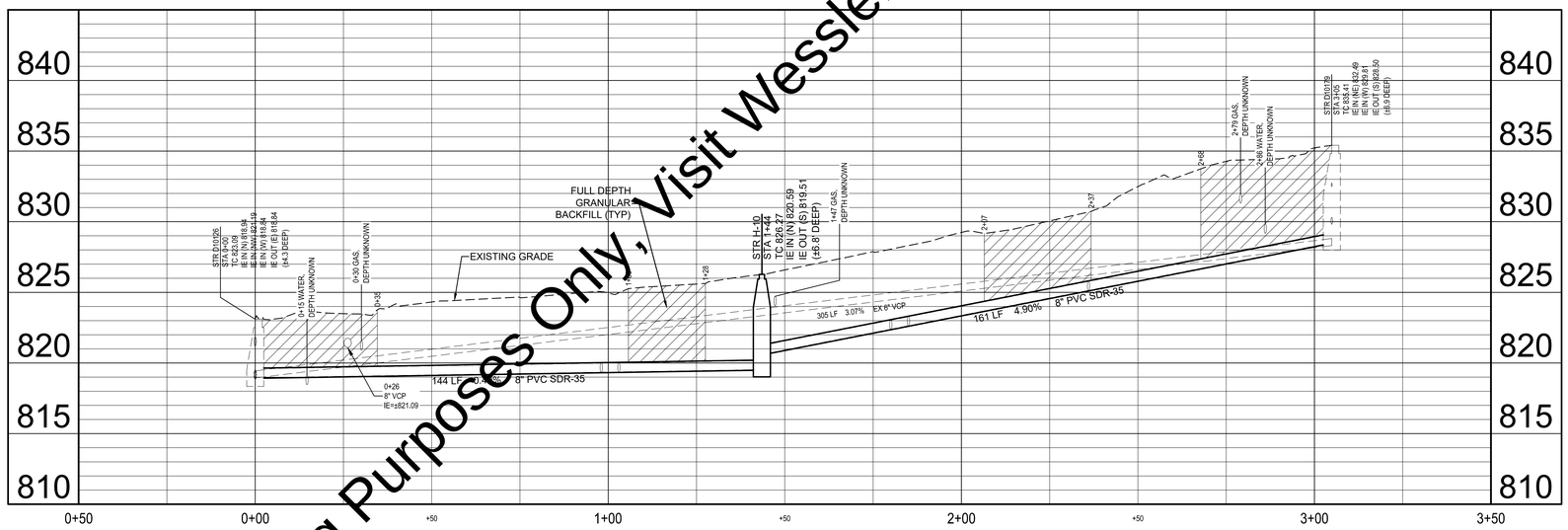
SHEET NO. 10

TOTAL SHEETS 20



PLAN - LINE H

0 10 20 40 FT
1"=20'



PROFILE - LINE H

HORIZ SCALE: 1" = 20'
VERT SCALE: 1" = 5'

EROSION CONTROL NOTES

1. ALL INLETS LOCATED WITHIN AND ADJACENT TO THE PROJECT LIMITS AND AT RISK TO RECEIVE CONSTRUCTION SITE STORMWATER ARE TO BE PROTECTED WITH TEMPORARY INLET PROTECTION MEASURES.
2. INSTALL INLET PROTECTION PRIOR TO CONSTRUCTION ACTIVITIES AT THE SITE.
3. LOCATE CONCRETE WASHOUT WITHIN THE CONSTRUCTION LIMITS.
4. SOIL TO BE STOCKPILED ALONG THE ROAD DURING CONSTRUCTION.
5. THE EXISTING ROADS WILL BE USED AS THE CONSTRUCTION ENTRANCE. TRACKED SEDIMENT IS TO BE REMOVED DAILY FROM ADJACENT ROADWAYS.
6. LAND DISTURBANCE AREAS ARE TO BE SEEDED AFTER CONSTRUCTION ACTIVITIES END WITHIN 15 DAYS.

NOTES

1. REPLACE 6" VCP WITH 8" SDR 35 PVC ALONG EXISTING SEWER ALIGNMENT, ADD ADDITIONAL NEW MH IN MIDDLE OF THE LINE. REHAB 2 MANHOLES.
2. LATERAL ELEVATIONS HAVE NOT BEEN VERIFIED. THE CONTRACTOR SHALL POTHOLE AND VERIFY EACH LATERAL DEPTH AT THE EDGE OF THE RIGHT OF WAY BEFORE CONSTRUCTION OF THE MAIN AND NOTIFY ENGINEER OF ANY CONFLICTS IN RECONNECTING LATERALS TO THE NEW SEWER MAIN.
3. THE CONTRACTOR SHALL VERIFY AND RECONNECT ALL ACTIVE LATERALS AS SHOWN ON DETAIL SHEET 17. THE CONTRACTOR SHALL LOCATE ALL CAPPED/ABANDONED LATERALS AND VERIFY WITH THE CITY THAT THEY ARE NO LONGER IN USE OR NEEDED.
4. THE CONTRACTOR SHALL VERIFY ALL MANHOLE DETAILS INCLUDING SIZE, DEPTH, MATERIAL AND EXISTING CONDITIONS TO VERIFY THE PROPOSED MANHOLES AND THE MANHOLE REHABILITATION PLAN.
5. ANY SANITARY SEWER PIPE LOCATED WITHIN 10 FEET HORIZONTALLY OR 18" VERTICALLY OF WATER LINES SHALL BE SDR-21 PVC WATER GRADE PRESSURE PIPE WITHIN THESE SETBACKS. PVC GASKETED ADAPTOR COUPLING FITTINGS SHALL BE USED TO TRANSITION BACK TO SDR-35 ONCE THE PIPE IS PAST THE WATERLINE SETBACKS, UNLESS SPECIFICALLY INDICATED OTHERWISE.

KEYED NOTES

A	ABANDON PIPE SEGMENT AND FILL COMPLETELY WITH GROUT.
D	ASPHALT PAVEMENT REPAIR.
D_1	ASPHALT DRIVE REPAIR
F_1	CONCRETE DRIVE REPAIR.
F_2	CONCRETE SIDEWALK TRANSITION.
Ha	PERPENDICULAR CURB RAMP.
I	INLET PROTECTION.
R	1.5" MILL AND HMA SURFACE, TYPE B.
R_1	REMOVE PIPE/STRUCTURE COMPLETELY.
R_2	REHAB MANHOLE, SEE MANHOLE REHAB SCHEDULE, SHEET 15.
R_3	REMOVE FRAME/CASTING, ADJUSTING RINGS, CONE/FLAT TOP AS REQUIRED TO MINIMUM 24" BELOW FINISHED GRADE. FILL REMAINING STRUCTURE WITH FLOWABLE FILL AND PATCH SURFACE IN ACCORDANCE WITH PAVEMENT REPAIR DETAIL.
15	CONCRETE CURB AND GUTTER REPAIR, MATCH EXISTING.

SCALE VERIFICATION	DRAWN BY	JRW	NO.	DATE	INITIALS	REVISION DESCRIPTIONS	
BAR IS ONE INCH LONG ON ORIGINAL DRAWING	CHECKED BY	JEB					
	APPROVED BY	MEC					
	ISSUE DATE	SEPTEMBER 2017					
	PROJECT NUMBER	196217-04-001					

MEGAN E. CARR REGISTERED No. 10910636 STATE OF INDIANA PROFESSIONAL ENGINEER 09/27/2017
Megan E. Carr

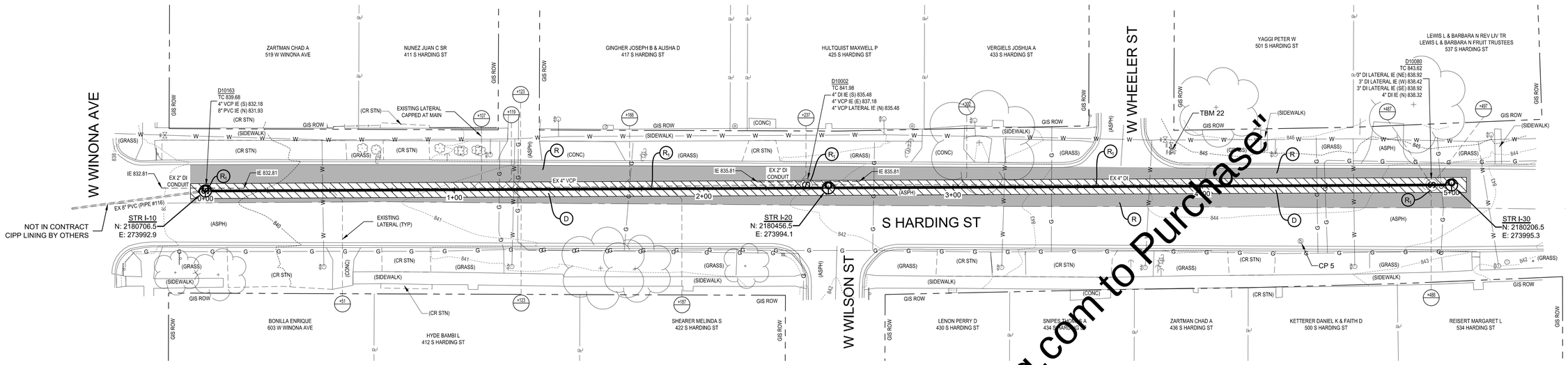
WESSLER ENGINEERING
More than a Project™

SEWER REHABILITATION - SEWER REPLACEMENT

CITY OF WARSAW BOARD OF PUBLIC WORKS & SAFETY
WARSAW, IN

LINE H PLAN AND PROFILE - S HARDING ST, ID NO. 301

SHEET NO. 11
TOTAL SHEETS 20



PLAN - LINE I

0 10 20 40 FT
1"=20'

KEYED NOTES

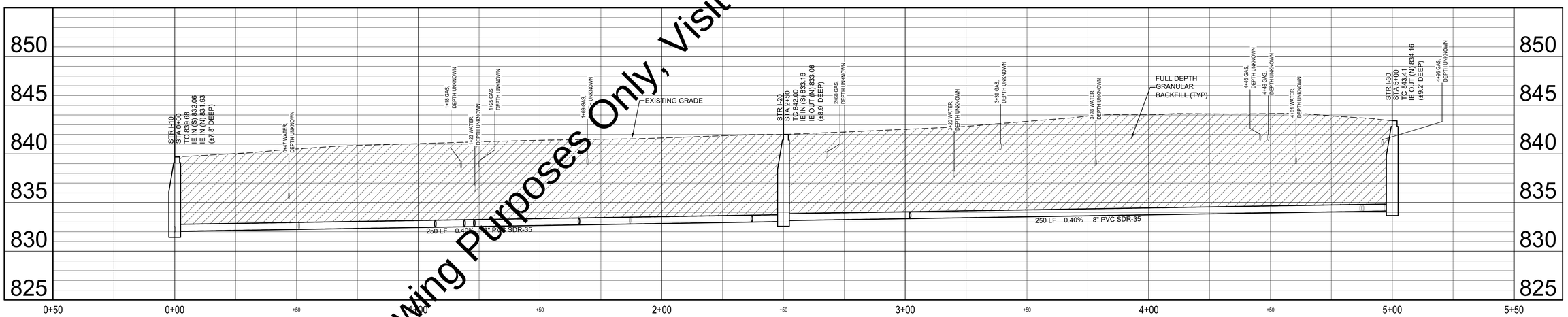
A	ABANDON PIPE SEGMENT AND FILL COMPLETELY WITH GROUT.
D	ASPHALT PAVEMENT REPAIR.
D_1	ASPHALT DRIVE REPAIR
F_1	CONCRETE DRIVE REPAIR.
F_2	CONCRETE SIDEWALK TRANSITION.
Ha	PERPENDICULAR CURB RAMP.
I	INLET PROTECTION.
R	1.5" MILL AND HMA SURFACE, TYPE B.
R_1	REMOVE PIPE/STRUCTURE COMPLETELY.
R_2	REHAB MANHOLE, SEE MANHOLE REHAB SCHEDULE, SHEET 15.
R_3	REMOVE FRAME/CASTING, ADJUSTING RINGS, CONE/FLAT TOP AS REQUIRED TO MINIMUM 24" BELOW FINISHED GRADE. FILL REMAINING STRUCTURE WITH FLOWABLE FILL AND PATCH SURFACE IN ACCORDANCE WITH PAVEMENT REPAIR DETAIL.
15	CONCRETE CURB AND GUTTER REPAIR, MATCH EXISTING.

EROSION CONTROL NOTES

1. ALL INLETS LOCATED WITHIN AND ADJACENT TO THE PROJECT LIMITS AND AT RISK TO RECEIVE CONSTRUCTION SITE STORMWATER ARE TO BE PROTECTED WITH TEMPORARY INLET PROTECTION MEASURES.
2. INSTALL INLET PROTECTION PRIOR TO CONSTRUCTION ACTIVITIES AT THE SITE.
3. LOCATE CONCRETE WASHOUT WITHIN THE CONSTRUCTION LIMITS.
4. SOIL TO BE STOCKPILED ALONG THE ROAD DURING CONSTRUCTION.
5. THE EXISTING ROADS WILL BE USED AS THE CONSTRUCTION ENTRANCE. TRACKED SEDIMENT IS TO BE REMOVED DAILY FROM ADJACENT ROADWAYS.
6. LAND DISTURBANCE AREAS ARE TO BE SEEDED AFTER CONSTRUCTION ACTIVITIES END WITHIN 15 DAYS.

NOTES

1. REPLACE 4" VCP WITH 8" SDR 35 PVC ALONG EXISTING SEWER ALIGNMENT. REPLACE 3 MANHOLES.
2. INCOMPLETE VIDEOS. CONTRACTOR TO VERIFY AND REINSTATE ALL LATERALS.
3. LATERAL ELEVATIONS HAVE NOT BEEN VERIFIED. THE CONTRACTOR SHALL POTHOLE AND VERIFY EACH LATERAL DEPTH AT THE EDGE OF THE RIGHT OF WAY BEFORE CONSTRUCTION OF THE MAIN AND NOTIFY ENGINEER OF ANY CONFLICTS IN RECONNECTING LATERALS TO THE NEW SEWER MAIN.
4. THE CONTRACTOR SHALL VERIFY AND RECONNECT ALL ACTIVE LATERALS AS SHOWN ON DETAIL SHEET 17. THE CONTRACTOR SHALL LOCATE ALL CAPPED/ABANDONED LATERALS AND VERIFY WITH THE CITY THAT THEY ARE NO LONGER IN USE OR NEEDED.
5. THE CONTRACTOR SHALL VERIFY ALL MANHOLE DETAILS INCLUDING SIZE, DEPTH, MATERIAL AND EXISTING CONDITIONS TO VERIFY THE PROPOSED MANHOLES AND THE MANHOLE REHABILITATION PLAN.
6. ANY SANITARY SEWER PIPE LOCATED WITHIN 10 FEET HORIZONTALLY OR 18" VERTICALLY OF WATER LINES SHALL BE SDR-21 PVC WATER GRADE PRESSURE PIPE WITHIN THESE SETBACKS. PVC GASKETED ADAPTOR COUPLING FITTINGS SHALL BE USED TO TRANSITION BACK TO SDR-35 ONCE THE PIPE IS PAST THE WATERLINE SETBACKS, UNLESS SPECIFICALLY INDICATED OTHERWISE.



PROFILE - LINE I

HORIZ SCALE: 1" = 20'
VERT SCALE: 1" = 5'

SCALE VERIFICATION	DRAWN BY	JRW	NO.	DATE	INITIALS	REVISION DESCRIPTIONS
BAR IS ONE INCH LONG ON ORIGINAL DRAWING	CHECKED BY	JEB				
	APPROVED BY	MEC				
	ISSUE DATE	SEPTEMBER 2017				
	PROJECT NUMBER	196217-04-001				

MEGAN E. CARR REGISTERED No. 10910636 STATE OF INDIANA PROFESSIONAL ENGINEER 09/27/2017
Megan E. Carr

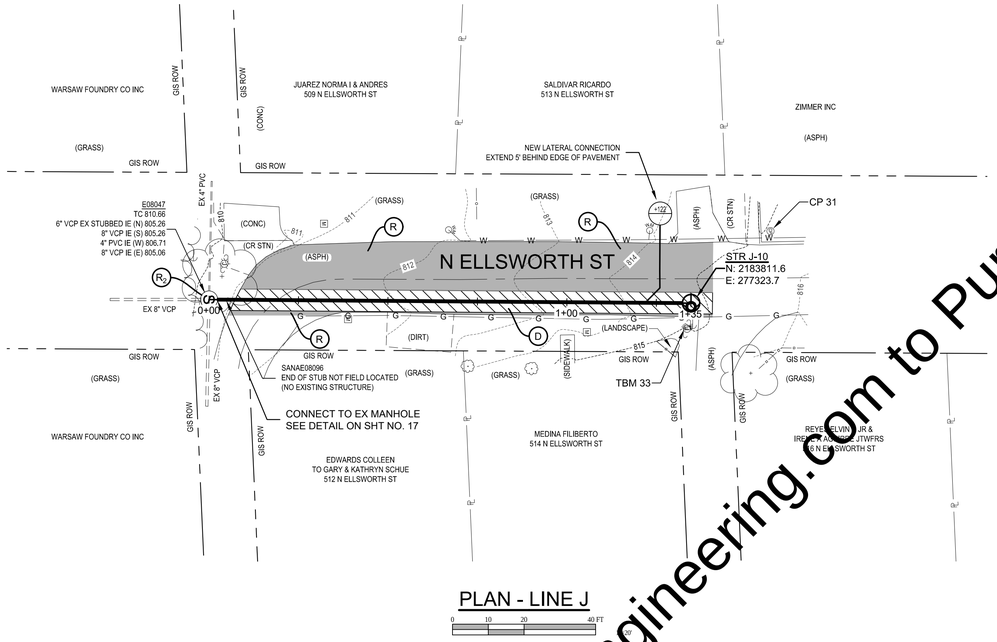
WESSLER ENGINEERING
More than a Project™

SEWER REHABILITATION - SEWER REPLACEMENT

CITY OF WARSAW BOARD OF PUBLIC WORKS & SAFETY
WARSAW, IN

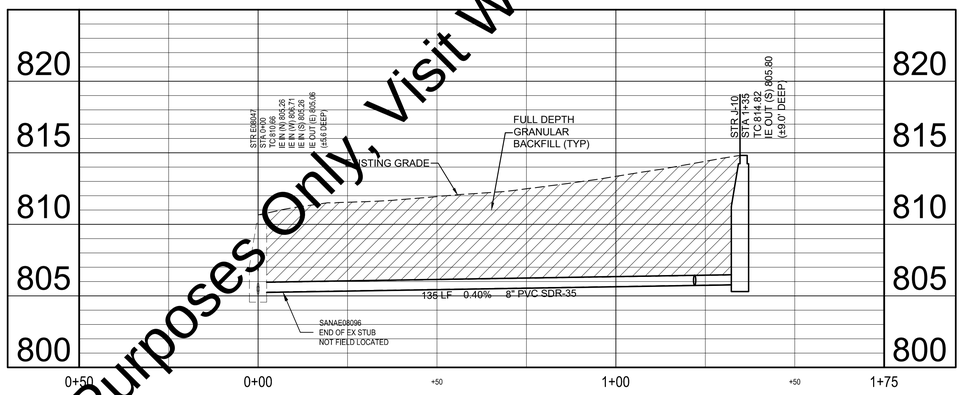
LINE I PLAN AND PROFILE - S HARDING ST, ID NO. 117, 118

SHEET NO. 12
TOTAL SHEETS 20



PLAN - LINE J

0 10 20 40 FT



PROFILE - LINE J

HORIZ SCALE: 1" = 20'

VERT SCALE: 1" = 5'

EROSION CONTROL NOTES

1. ALL INLETS LOCATED WITHIN AND ADJACENT TO THE PROJECT LIMITS AND AT RISK TO RECEIVE CONSTRUCTION SITE STORMWATER ARE TO BE PROTECTED WITH TEMPORARY INLET PROTECTION MEASURES.
2. INSTALL INLET PROTECTION PRIOR TO CONSTRUCTION ACTIVITIES AT THE SITE.
3. LOCATE CONCRETE WASHOUT WITHIN THE CONSTRUCTION LIMITS.
4. SOIL TO BE STOCKPILED ALONG THE ROAD DURING CONSTRUCTION.
5. THE EXISTING ROADS WILL BE USED AS THE CONSTRUCTION ENTRANCE. TRACKED SEDIMENT IS TO BE REMOVED DAILY FROM ADJACENT ROADWAYS.
6. LAND DISTURBANCE AREAS ARE TO BE SEEDED AFTER CONSTRUCTION ACTIVITIES END WITHIN 15 DAYS.

NOTES

1. REPLACE 6" VCP PIPE STUB AT MANHOLE E08047 TO THE NORTH AND INSTALL NEW 8" SDR 35 PVC SEWER 135' TO THE NORTH.
2. LATERAL ELEVATIONS HAVE NOT BEEN VERIFIED. THE CONTRACTOR SHALL POTHOLE AND VERIFY EACH LATERAL DEPTH AT THE EDGE OF THE RIGHT OF WAY BEFORE CONSTRUCTION OF THE MAIN AND NOTIFY ENGINEER OF ANY CONFLICTS IN RECONNECTING LATERALS TO THE NEW SEWER MAIN.
3. THE CONTRACTOR SHALL VERIFY AND RECONNECT ALL ACTIVE LATERALS AS SHOWN ON DETAIL SHEET 17. THE CONTRACTOR SHALL LOCATE ALL CAPPED/ABANDONED LATERALS AND VERIFY WITH THE CITY THAT THEY ARE NO LONGER IN USE OR NEEDED.
4. THE CONTRACTOR SHALL VERIFY ALL MANHOLE DETAILS INCLUDING SIZE, DEPTH, MATERIAL AND EXISTING CONDITIONS TO VERIFY THE PROPOSED MANHOLES AND THE MANHOLE REHABILITATION PLAN.
5. ANY SANITARY SEWER PIPE LOCATED WITHIN 10 FEET HORIZONTALLY OR 18" VERTICALLY OF WATER LINES SHALL BE SDR-21 PVC WATER GRADE PRESSURE PIPE WITHIN THESE SETBACKS. PVC GASKETED ADAPTOR COUPLING FITTINGS SHALL BE USED TO TRANSITION BACK TO SDR-35 ONCE THE PIPE IS PAST THE WATERLINE SETBACKS, UNLESS SPECIFICALLY INDICATED OTHERWISE.

KEYED NOTES

A	ABANDON PIPE SEGMENT AND FILL COMPLETELY WITH GROUT.
D	ASPHALT PAVEMENT REPAIR.
D_1	ASPHALT DRIVE REPAIR
F_1	CONCRETE DRIVE REPAIR.
F_2	CONCRETE SIDEWALK TRANSITION.
Ha	PERPENDICULAR CURB RAMP.
I	INLET PROTECTION.
R	1.5" MILL AND HMA SURFACE, TYPE B.
R_1	REMOVE PIPE/STRUCTURE COMPLETELY.
R_2	REHAB MANHOLE, SEE MANHOLE REHAB SCHEDULE, SHEET 15.
R_3	REMOVE FRAME/CASTING, ADJUSTING RINGS, CONE/FLAT TOP AS REQUIRED TO MINIMUM 24" BELOW FINISHED GRADE. FILL REMAINING STRUCTURE WITH FLOWABLE FILL AND PATCH SURFACE IN ACCORDANCE WITH PAVEMENT REPAIR DETAIL.
15	CONCRETE CURB AND GUTTER REPAIR, MATCH EXISTING.

SCALE VERIFICATION	DRAWN BY	JRW	NO.	DATE	INITIALS	REVISION DESCRIPTIONS	
BAR IS ONE INCH LONG ON ORIGINAL DRAWING	CHECKED BY	JEB					
	APPROVED BY	MEC					
	ISSUE DATE	SEPTEMBER 2017					
	PROJECT NUMBER	196217-04-001					

MEGAN E. CARR REGISTERED No. 10910636 STATE OF INDIANA PROFESSIONAL ENGINEER 09/27/2017

Megan E. Carr

WESSLER ENGINEERING More than a Project™

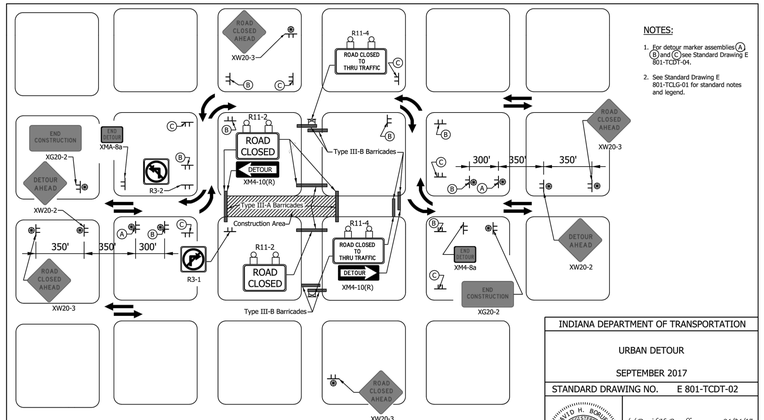
SEWER REHABILITATION - SEWER REPLACEMENT

CITY OF WARSAW BOARD OF PUBLIC WORKS & SAFETY
WARSAW, IN

LINE J PLAN AND PROFILE - N ELLSWORTH ST, ID NO. 58

SHEET NO. 13

TOTAL SHEETS 20



NOTES:

1. For detour marker assemblies (A) and (C) see Standard Drawing E 801-TCDT-04.
2. See Standard Drawing E 801-TCLG-01 for standard notes and legend.

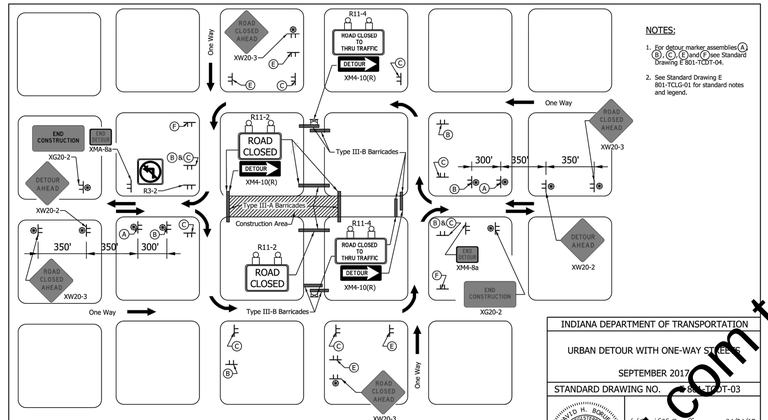
TYPICAL APPLICATIONS OF TRAFFIC CONTROL DEVICES FOR AN URBAN DETOUR

INDIANA DEPARTMENT OF TRANSPORTATION	
URBAN DETOUR	
SEPTEMBER 2017	
STANDARD DRAWING NO.	E 801-TCDT-02

DAVID H. BORUFF REGISTERED No. 60900348 STATE OF INDIANA PROFESSIONAL ENGINEER

/s/ David H. Boruff 04/24/17 DESIGN STANDARDS ENGINEER DATE

/s/ John Leckie 04/25/17 CHIEF ENGINEER DATE



NOTES:

1. For detour marker assemblies (A), (C), (E) and (F) see Standard Drawing E 801-TCDT-04.
2. See Standard Drawing E 801-TCLG-01 for standard notes and legend.

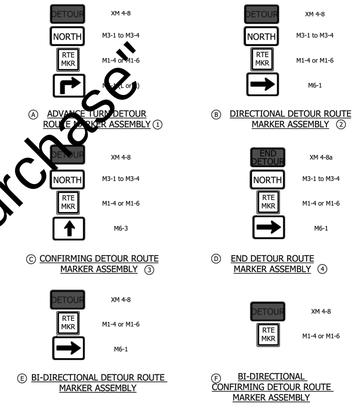
TYPICAL APPLICATIONS OF TRAFFIC CONTROL DEVICES FOR AN URBAN DETOUR

INDIANA DEPARTMENT OF TRANSPORTATION	
URBAN DETOUR WITH ONE-WAY STREET	
SEPTEMBER 2017	
STANDARD DRAWING NO.	E 801-TCDT-03

DAVID H. BORUFF REGISTERED No. 60900348 STATE OF INDIANA PROFESSIONAL ENGINEER

/s/ David H. Boruff 04/24/17 DESIGN STANDARDS ENGINEER DATE

/s/ John Leckie 04/25/17 CHIEF ENGINEER DATE



(A) ADVANCE URBAN DETOUR ROUTE MARKER ASSEMBLY (1)

(B) DIRECTIONAL DETOUR ROUTE MARKER ASSEMBLY (2)

(C) CONFIRMING DETOUR ROUTE MARKER ASSEMBLY (3)

(D) END DETOUR ROUTE MARKER ASSEMBLY (4)

(E) BI-DIRECTIONAL DETOUR ROUTE MARKER ASSEMBLY

(F) BI-DIRECTIONAL CONFIRMING DETOUR ROUTE MARKER ASSEMBLY

STATE HIGHWAY / NUMBERED LOCAL HIGHWAY

NOTES:

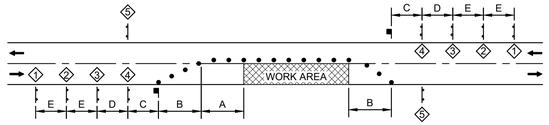
1. Advance turn detour route marker assemblies shall be located as shown, or after the last cross street prior to the beginning of the detour, as directed.
2. Directional detour route marker assemblies shall be located 100 ft. to 200 ft. in advance of all required turns within the detour limits.
3. Confirming detour route marker assemblies shall be located 200 ft. past all major intersections, as required, and shall be spaced a maximum of 3 mi. on a rural detour or 0.5 mi. on an urban detour on each leg of such detours. Confirming detour route marker assemblies shall be placed after a required turn when directed.
4. End detour route marker assemblies shall be located 100 ft. to 200 ft. in advance of the final turn of the detour.

INDIANA DEPARTMENT OF TRANSPORTATION	
DETOUR ROUTE MARKER ASSEMBLIES	
SEPTEMBER 2017	
STANDARD DRAWING NO.	E 801-TCDT-04

DAVID H. BORUFF REGISTERED No. 60900348 STATE OF INDIANA PROFESSIONAL ENGINEER

/s/ David H. Boruff 04/24/17 DESIGN STANDARDS ENGINEER DATE

/s/ John Leckie 04/25/17 CHIEF ENGINEER DATE



TEMPORARY FLAGGER OPERATION

SCALE: NONE

- WORK AREA(S)
- TYPE A CONSTRUCTION WARNING LIGHT
- WORKSITE ADDED PENALTY (G20-7) ONLY FOR INDOT WORKS
- "ROAD WORK AHEAD" (W20-1) OR "UTILITY WORK AHEAD" (W21-7)
- "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

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 2.0 TIMES THE SPEED LIMIT IN MPH USED FOR TANGENT CHANNELIZATION.

ADVANCE WARNING SIGN AND FLAGGER OPERATION SPACING

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 3 AND 4 WHEN WORK IS NOT IN PROGRESS.
4. DURING CONSTRUCTION MINIMIZE DAMAGE TO THE EXISTING PAVEMENT, DRIVES, CURBS AND SIDEWALKS.
5. BACKFILL EXCAVATIONS IN THE PAVEMENT AREAS DAILY AND TEMPORARILY COVER WITH STEEL PLATES UNTIL PAVEMENT IS REPLACED.
6. FRIEND STREET IS A DEAD END; IT CAN NOT BE CLOSED.
7. IF THE CLOSURE OF A STREET IS NEEDED, UTILIZE INDOT STANDARD DRAWINGS E 801-TCDT-02 THRU E 801-TCDT-04.
8. RECOMMENDED DETOUR ROUTE FOR CENTER STREET IS; COLUMBIA STREET, AND MARKET STREET.
9. RECOMMENDED DETOUR ROUTE FOR WASHINGTON STREET AND MARKET STREET IS; CENTER STREET, BUFFALO STREET, AND WINONA AVENUE.
10. RECOMMENDED DETOUR ROUTE FOR LAKE STREET AND MARKET STREET IS; CENTER STREET, BUFFALO STREET, AND WINONA AVENUE.
11. RECOMMENDED DETOUR ROUTE FOR INDIANA STREET AND CENTER STREET IS; MAIN STREET, BUFFALO STREET, AND MARKET STREET.
12. RECOMMENDED DETOUR ROUTE FOR BUFFALO STREET IS; MARKET STREET, LAKE STREET, AND WINONA AVENUE.
13. RECOMMENDED DETOUR ROUTE FOR MORTON STREET, EAGLE STREET, AND PRAIRIE STREET IS; LOGAN STREET, WILSON STREET, AND HARDING STREET.
14. RECOMMENDED DETOUR ROUTE FOR HARDING STREET, EAGLE STREET, AND PRAIRIE STREET IS; MORTON STREET, WILSON STREET, WHEELER STREET, AND UNION STREET.
15. RECOMMENDED DETOUR ROUTE FOR HARDING STREET, WILSON STREET, AND WHEELER STREET IS; MORTON STREET, PRAIRIE STREET, AND UNION STREET.
16. RECOMMENDED DETOUR ROUTE FOR ELLSWORTH STREET IS; ARTHUR STREET AND PARK AVENUE.
17. DO NOT CLOSE ADJACENT STREETS AT THE SAME TIME.
18. NOTIFY PROPERTY OWNERS AND BUSINESSES AT LEAST 72 HOURS PRIOR TO STREET CLOSURE.
19. SUBMIT A DETAILED DETOUR ROUTE PLAN AND TIMELINE FOR APPROVAL 2 WEEKS PRIOR TO ANY STREET CLOSURES.
20. PROTECTION OF AND ACCESS FOR PEDESTRIANS AND EMERGENCY VEHICLES MUST BE MAINTAINED DURING CONSTRUCTION.
21. WHEN WORK IMPACTS SIDEWALK OR CROSSWALK ACCESS, PROVIDE "SIDEWALK CLOSED" SIGNS AND "SIDEWALK CLOSED AHEAD" SIGNS AT THE NEAREST CROSSWALK.
22. BACKFILL EXCAVATIONS IN THE SIDEWALK AREAS DAILY AND TEMPORARILY TOP WITH COARSE AGGREGATE NO. 12 UNTIL THE CONCRETE SIDEWALK IS REPLACED.
23. COORDINATE CLOSURES WITH ALL EMERGENCY AGENCIES, SCHOOL DISTRICTS, AND OTHER CITY PROJECTS.

SCALE VERIFICATION	DRAWN BY	JRW
BAR IS ONE INCH LONG ON ORIGINAL DRAWING	CHECKED BY	JEB
	APPROVED BY	MEC
	ISSUE DATE	SEPTEMBER 2017
	PROJECT NUMBER	196217-04-001

NO.	DATE	INITIALS	REVISION DESCRIPTIONS

MEGAN E. CARR REGISTERED No. 10910636 STATE OF INDIANA PROFESSIONAL ENGINEER 09/07/2017

Megan E. Carr

WESSLER ENGINEERING More than a Project™

SEWER REHABILITATION - SEWER REPLACEMENT

CITY OF WARSAW BOARD OF PUBLIC WORKS & SAFETY
WARSAW, IN

TRAFFIC CONTROL PLAN

SHEET NO. 14

TOTAL SHEETS 20

STRUCTURE DATA TABLE

STRUCTURE NUMBER	STATION	DESCRIPTION		TOP OF RIM	DOWNSTREAM PIPE						PIPE INVERTS								CONNECT TO STR	REMARKS
		STRUCTURE TYPE/SIZE	CASTING, MANUFACTURER AND MODEL (OR EQUAL)		SIZE	TYPE	LENGTH	UP STREAM	DOWN STREAM	SLOPE	N	NW	W	SW	S	SE	E	NE		
				ELEV	IN		LF	ELEV	ELEV	%	ELEV	ELEV	ELEV	ELEV	ELEV	ELEV	ELEV	ELEV		
LINE A																				
A-10	0+00	STANDARD SANITARY MANHOLE	NEENAH-R-1772	819.67							813.57		813.57*		813.67		813.57		UNKNOWN	DOWNSTREAM STRUCTURE IS OUTSIDE PROJECT LIMITS
A-20	2+30	STANDARD SANITARY MANHOLE	NEENAH-R-1772	821.44	8	PVC	230	815.29	813.57	0.75%	817.04		817.29		815.29*			817.29	A-10	
LINE B																				
B-10	0+00	STANDARD SANITARY MANHOLE	NEENAH-R-1772	819.8	8	PVC	4.0	813.70	813.67	0.82%	813.70*						813.80		A-10	
B-20	1+40	INSIDE DROP MANHOLE	NEENAH-R-1772	822.89	8	PVC	140	816.17	813.80	1.70%	816.37		816.17*				816.27		B-10	
B-30	3+05	STANDARD SANITARY MANHOLE	NEENAH-R-1772	825.34	8	PVC	166	819.08	816.27	1.66%			819.08*						B-20	
(CB D09078)	1+40, 6'L	(EX BRICK CATCH BASIN)		822.69	8	PVC	6	819.87	816.37	0.50%									B-20	
LINE C																				
(D09095)	0+00	(EX BRICK MANHOLE)		(819.16)							812.14		(811.71*)	(813.06)	(812.11)		(811.71)	(813.06)	UNKNOWN	REHAB EX SAMH D09095, SEE TABLE ON SHT 16 DOWNSTREAM STRUCTURE IS OUTSIDE PROJECT LIMITS
C-10	2+80	STANDARD SANITARY MANHOLE	NEENAH-R-1772	820.07	8	PVC	280	812.68	812.14	0.40%					813.26				(D09095)	
LINE D																				
(D09097)	0+00	(EX BRICK MANHOLE)		(823.06)							812.31		(812.36*)			(814.51)	(812.31)		UNKNOWN	REHAB EX SAMH D09097, SEE TABLE ON SHT 16 DOWNSTREAM STRUCTURE IS OUTSIDE PROJECT LIMITS
D-10	2+30	STANDARD SANITARY MANHOLE	NEENAH-R-1772	822.64	8	PVC	230	816.08	813.31	1.64%					816.08*				(D09097)	
LINE E																				
(D090174)	0+00	(EX PRECAST MANHOLE)		(825.11)									(813.06*)		(813.41)		(813.41)		UNKNOWN	REHAB SAMH D090174, SEE TABLE ON SHT 16 DOWNSTREAM STRUCTURE IS OUTSIDE PROJECT LIMITS
(D09180)	1+83	(EX LINED BRICK MANHOLE)		(825.12)	8	PVC	93	815.87	813.41	1.34%	(815.87*)	(819.92)						(817.27)	(D090174)	
LINE F																				
(D10013)	0+00, 10'L	(EX PRECAST MANHOLE)		(825.36)									(816.76*)		816.86	(817.01)	(817.06)		UNKNOWN	DOWNSTREAM STRUCTURE IS OUTSIDE PROJECT LIMITS
F-10	0+00	STANDARD SANITARY MANHOLE	NEENAH-R-1772	825.12	8	PVC	10	816.96	816.86		816.96*						817.06		(D10013)	DOWNSTREAM STRUCTURE IS OUTSIDE PROJECT LIMITS
F-20	4+00	STANDARD SANITARY MANHOLE	NEENAH-R-1772	827.15	8	PVC	400	819.98	817.06	0.73%			819.9*						F-10	
LINE G																				
(C10046)	0+00	(EX PRECAST MANHOLE)		(824.91)							(820.46)		(820.46)				(820.36*)		UNKNOWN	REHAB SAMH C10046, SEE TABLE ON SHT 16 DOWNSTREAM STRUCTURE IS OUTSIDE PROJECT LIMITS
(C10047)	2+65	(EX PRECAST MANHOLE)		(832.66)	8	PVC	265	824.36	820.46	1.47%					(824.36*)				(C10046)	REHAB SAMH C10047, SEE TABLE ON SHT 16
LINE H																				
(D10126)	0+00	(EX BRICK MANHOLE)		(823.09)							(818.94)	(821.19)	(818.84)					(818.84*)	UNKNOWN	REHAB SAMH D10126, SEE TABLE ON SHT 16 DOWNSTREAM STRUCTURE IS OUTSIDE PROJECT LIMITS
H-10	1+44	STANDARD SANITARY MANHOLE	NEENAH-R-1772	826.27	8	PVC	144	819.51	818.94	0.40%	820.59				819.51*				(D10126)	
(D10179)	3+05	(EX BRICK MANHOLE)		(835.41)	8	PVC	161	828.50	820.59	4.90%			(829.81)		828.50*			(832.49)	H-10	REHAB SAMH D10179, SEE TABLE ON SHT 16

NOTES
1. EXISTING STRUCTURES AND INVERTS ARE INDICATED BY PARENTHESES ( )
2. INVERT OUT IS INDICATED BY AN ASTERISKS *
3. WARSAW NAMING CONVENTION INCLUDES STRUCTURE TYPE, SAMH INDICATES SANITARY MANHOLE

SCALE VERIFICATION			NO.	DATE	INITIALS	REVISION DESCRIPTIONS
BAR IS ONE INCH LONG ON ORIGINAL DRAWING	DRAWN BY	JRW				
	CHECKED BY	JEB				
	APPROVED BY	MEC				
	ISSUE DATE	SEPTEMBER 2017				
	PROJECT NUMBER	196217-04-001				

MEGAN E. CARR REGISTERED No. 10910636 STATE OF INDIANA PROFESSIONAL ENGINEER 09/27/2017
Megan E. Carr

WESSLER ENGINEERING
More than a Project™

SEWER REHABILITATION - SEWER REPLACEMENT
CITY OF WARSAW BOARD OF PUBLIC WORKS & SAFETY
WARSAW, IN

STRUCTURE DATA TABLE

SHEET NO. 15
TOTAL SHEETS 20

STRUCTURE DATA TABLE (CONT.)

STRUCTURE NUMBER	STATION	DESCRIPTION		TOP OF RIM	DOWNSTREAM PIPE						PIPE INVERTS								CONNECT TO STR	REMARKS
		STRUCTURE TYPE/SIZE	CASTING, MANUFACTURER AND MODEL (OR EQUAL)		SIZE	TYPE	LENGTH	UP STREAM	DOWN STREAM	SLOPE	N	NW	W	SW	S	SE	E	NE		
				ELEV	IN		LF	ELEV	ELEV	%	ELEV	ELEV	ELEV	ELEV	ELEV	ELEV	ELEV	ELEV		
LINE I																				
I-10	0+00	STANDARD SANITARY MANHOLE	NEENAH-R-1772	839.68	8	PVC					831.93*				832.06				UNKNOWN	DOWNSTREAM STRUCTURE IS OUTSIDE PROJECT LIMITS
I-20	2+50	STANDARD SANITARY MANHOLE	NEENAH-R-1772	842.00	8	PVC	250	833.06	832.06	0.40%	833.06*				833.16				I-10	
I-30	5+00	STANDARD SANITARY MANHOLE	NEENAH-R-1772	843.41	8	PVC	250	834.16	833.16	0.40%	834.16*								I-20	
LINE J																				
(E08047)	0+00	(EX PRECAST MANHOLE)		(810.66)							(805.26)		(806.71)		(805.26)		(805.06*)		UNKNOWN	REHAB SAMH E08047, SEE TABLE THIS SHEET DOWNSTREAM STRUCTURE IS OUTSIDE PROJECT LIMITS
J-10	1+35	STANDARD SANITARY MANHOLE	NEENAH-R-1772	814.82	8	PVC	135	805.80	805.26	0.40%					805.80				(E08047)	
MISCELLANEOUS																				
(C09008)																				REMOVE (REPLACE WITH STR A-10), SEE SHT NO. 04
(C09016)																				REMOVE (REPLACE WITH STR A-20), SEE SHT NO. 04
(D09076)																				ABANDON, SEE SHT NO. 05
(D09077)																				ABANDON, SEE SHT NO. 05
(D09087)																				ABANDON, SEE SHT NO. 06
(D09089)																				ABANDON, SEE SHT NO. 06
(D09183)																				ABANDON, SEE SHT NO. 07
(D10002)																				REMOVE (REPLACE WITH STR I-20), SEE SHT NO. 12
(D10011)																				REMOVE (REPLACE WITH STR F-20), SEE SHT NO. 09
(D10080)																				REMOVE (REPLACE WITH STR I-30), SEE SHT NO. 12
(D10155)																				ABANDON, SEE SHT NO. 09
(D10163)																				REMOVE (REPLACE WITH STR I-10), SEE SHT NO. 12

NOTES
1. EXISTING STRUCTURES AND INVERTS ARE INDICATED BY PARENTHESES ( )
2. INVERT OUT IS INDICATED BY AN ASTERISKS *
3. WARSAW NAMING CONVENTION INCLUDES STRUCTURE TYPE, SAMH INDICATES SANITARY MANHOLE

MANHOLE REHAB DATA TABLE

PLAN SHEET	MANHOLE ID	MANHOLE DEPTH	EXISTING MANHOLE MATERIAL	SURFACE	MANHOLE LINER	MANHOLE LINER	FRAME & COVER WORK	CASTING, MANUFACTURER AND MODEL (OR EQUAL)	WALL WORK	BENCH WORK	REMOVE AND GROUT STEPS, EACH
		FT				SF					
05	SACBD09078	3	BRICK	ASPHALT	FULL LINER	38	NONE		NONE	NONE	NONE
06	SAMHD09095	7.4	BRICK	ASPHALT	FULL LINER	93	REPLACE F/C	NEENAH-R-1772	NONE	NONE	2
07	SAMHD09097	10.8	BRICK	ASPHALT	FULL LINER	136	REPLACE F/C	NEENAH-R-1772	NONE	INSTALL BENCHWALL	4
08	SAMHD09174	12	CONCRETE	ASPHALT	FULL LINER	151	REPLACE F/C	NEENAH-R-1772	NONE	NONE	NONE
10	SAMHC10046	4.5	CONCRETE	LAWN	FULL LINER	57	REPLACE F/C	NEENAH-R-1772	NONE	NONE	NONE
10	SAMHC10047	8.3	CONCRETE	ASPHALT	FULL LINER	104	REPLACE F/C	NEENAH-R-1772	Grout 2 Voids	REWORK CHANNEL	3
11	SAMHD10126	4.3	BRICK	CONCRETE	FULL LINER	54	NONE		NONE	INSTALL BENCHWALL	NONE
11	SAMHD10179	7.1	BRICK	LAWN	FULL LINER	89	NONE		NONE	NONE	NONE
13	SAMHE08047	5.6	CONCRETE		FULL LINER	70	NONE		NONE	INSTALL BENCHWALL	NONE
TOTALS					9	792		5			9

NOTES
1. THE CONTRACTOR SHALL VERIFY ALL MANHOLE DETAILS INCLUDING SIZE, DEPTH, MATERIAL AND EXISTING CONDITIONS TO VERIFY THE MANHOLE REHABILITATION PLAN.

SCALE VERIFICATION	DRAWN BY	JRW	NO.	DATE	INITIALS	REVISION DESCRIPTIONS	
BAR IS ONE INCH LONG ON ORIGINAL DRAWING	CHECKED BY	JEB					
	APPROVED BY	MEC					
	ISSUE DATE	SEPTEMBER 2017					
	PROJECT NUMBER	196217-04-001					

MEGAN E. CARR REGISTERED No. 10910636 STATE OF INDIANA PROFESSIONAL ENGINEER 09/27/2017
Megan E. Carr

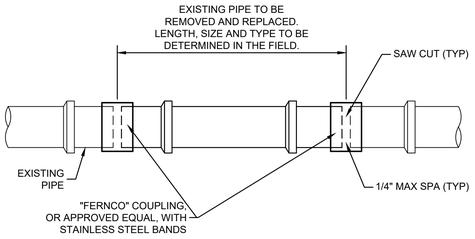
WESSLER ENGINEERING
More than a Project™

SEWER REHABILITATION - SEWER REPLACEMENT

CITY OF WARSAW BOARD OF PUBLIC WORKS & SAFETY
WARSAW, IN

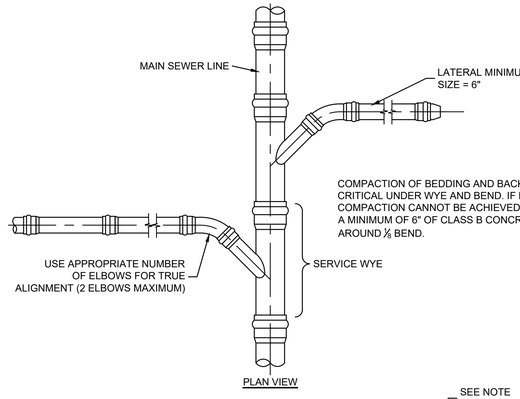
STRUCTURE DATA TABLE (CONT.) AND MANHOLE REHAB DATA TABLE

SHEET NO. 16
TOTAL SHEETS 20

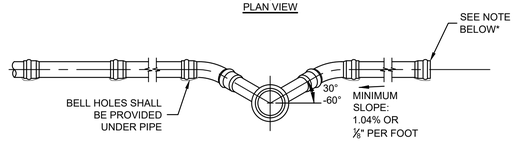


SANITARY SEWER REPAIR AND LATERAL REPAIR

SCALE: NONE



PLAN VIEW



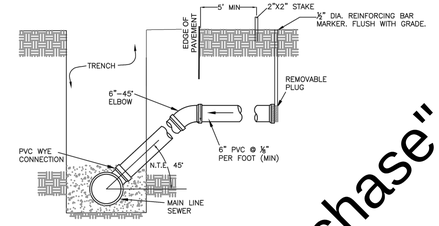
ELEVATION

*NOTE:
CONNECT TO EXISTING SERVICE.

NOTES:
1. INSTALL WYE BRANCHES AT LOCATIONS OF EXISTING CONNECTIONS UNLESS DIRECTED OTHERWISE.
2. SEWER SERVICE LATERALS SHALL BE A MINIMUM OF 6" PIPE.
3. CONNECT NEW SERVICE FROM NEW MAIN TO EXISTING SERVICE LATERAL AS SHOWN ON DRAWINGS. PROVIDE ANY FITTINGS NECESSARY FOR CONNECTION OF NEW 6" PVC TO EXISTING SERVICES (MATERIALS AND SIZE UNKNOWN).

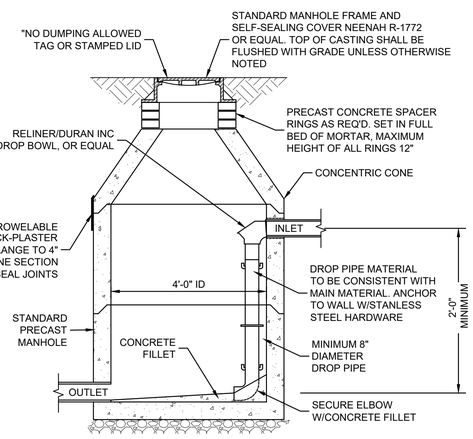
SANITARY LATERAL FOR SHALLOW SEWERS (LESS THAN 15' DEEP)

SCALE: NONE



NEW SERVICE LATERAL

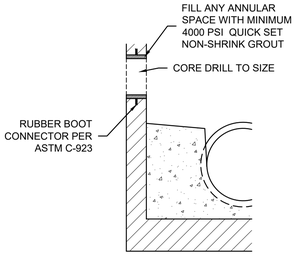
SCALE: NONE



NOTES:
1. GENERAL CONSTRUCTION REQUIREMENTS SAME AS STANDARD MANHOLE.
2. MAY BE ALLOWED FOR CONNECTION TO EXISTING MANHOLE.

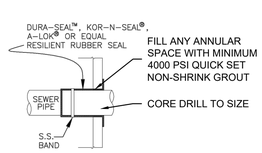
INSIDE DROP MANHOLE

SCALE: NONE



CONNECTION TO EXISTING CONCRETE STRUCTURE

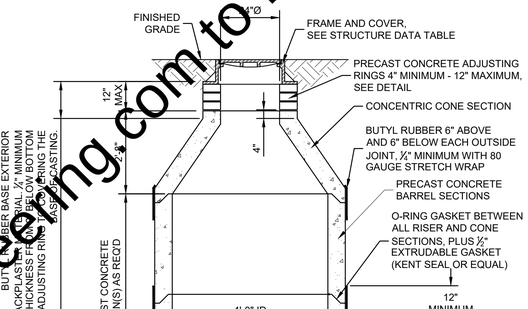
SCALE: NONE



NOTES:
1. FOR CONNECTION TO AN EXISTING BRICK STRUCTURE, FIRST PERFORM MANHOLE REHABILITATION FULL DEPTH LINING, THEN CORE DRILL FOR THE NEW CONNECTION. FILL ANY ANNULAR SPACE WITH GROUT AND ADDITIONALLY A CONCRETE COLLAR MAY BE NECESSARY TO STABILIZE THE CONNECTION.

CONNECTION TO EXISTING BRICK STRUCTURE

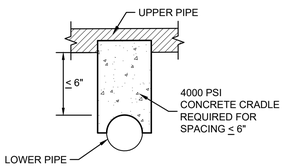
SCALE: NONE



NOTES:
1. FOR NEW MANHOLES REPLACING EXISTING STRUCTURES, PROVIDE ADEQUATE PIPE SUPPORT DURING REMOVAL OF OLD STRUCTURE AND DURING NEW CONSTRUCTION TO PREVENT PIPE DAMAGE.

STANDARD SANITARY SEWER MANHOLE

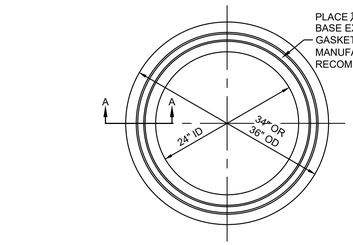
SCALE: NONE



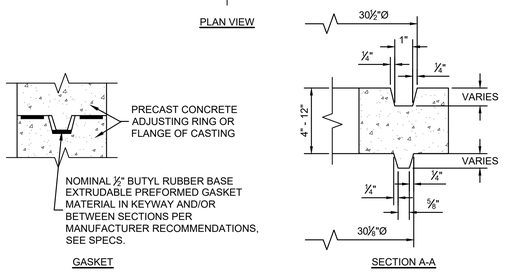
NOTES:
1. IF THE EXISTING PIPE IS DAMAGED OR IN POOR CONDITION, AS DETERMINED BY THE OWNER OR ENGINEER, THE CONTRACTOR SHALL REPAIR THE PIPE PRIOR TO CONCRETE CRADLE PLACEMENT.

CONCRETE CRADLE

SCALE: NONE



PLAN VIEW



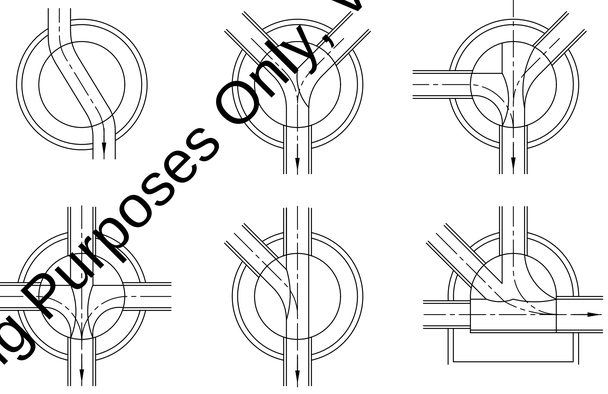
GASKET

SECTION A-A

NOTES:
1. PRECAST CONCRETE ADJUSTING RINGS SHALL HAVE KEYWAY/CHANNEL CONSTRUCTION. "SMOOTH" ADJUSTING RINGS SHALL NOT BE PERMITTED.

PRECAST CONCRETE ADJUSTING RING

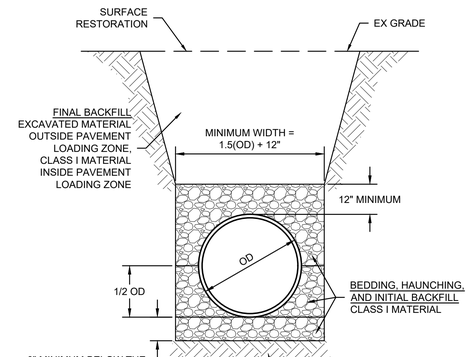
SCALE: NONE



NOTES:
1. SANITARY SEWER BENCH SLOPE = ½" PER FOOT

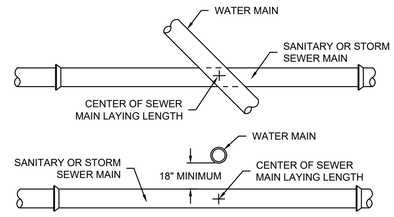
STANDARD MANHOLE BENCHES

SCALE: NONE



FLEXIBLE (HDPE, PP, PVC) PIPE TRENCH

SCALE: NONE



NOTES:
1. WATER MAIN AND SEWER MINIMUM SEPARATION: 18" VERTICAL SEPARATION 10'-0" HORIZONTAL SEPARATION.
2. WHERE WATER MAIN AND SEWER SEPARATION IS LESS THAN 18" VERTICAL OR 10' HORIZONTAL, THE SEWER MUST BE DUCTILE IRON, SDR-21 PVC, OR CONCRETE ENCASED.

MINIMUM CROSSOVER AND SEPARATION REQUIREMENTS FOR SEWER AND WATER MAINS

SCALE: NONE

SCALE VERIFICATION	DRAWN BY	JRW	NO.	DATE	INITIALS	REVISION DESCRIPTIONS	
BAR IS ONE INCH LONG ON ORIGINAL DRAWING	CHECKED BY	JEB					
	APPROVED BY	MEC					
	ISSUE DATE	SEPTEMBER 2017					
	PROJECT NUMBER	196217-04-001					

MEGAN E. CARR REGISTERED No. 10910636 STATE OF INDIANA PROFESSIONAL ENGINEER 09/27/2017

Megan E. Carr

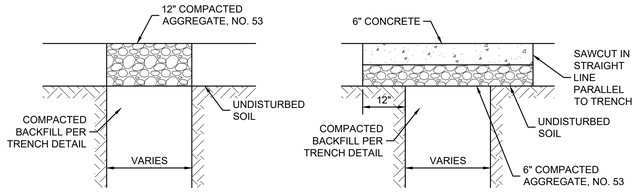
WESSLER ENGINEERING
More than a Project™

SEWER REHABILITATION - SEWER REPLACEMENT

CITY OF WARSAW BOARD OF PUBLIC WORKS & SAFETY
WARSAW, IN

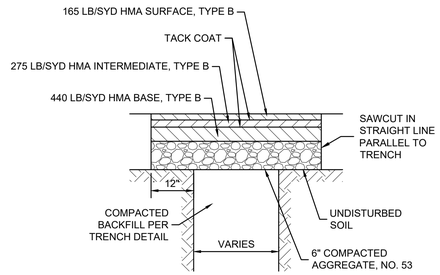
MISCELLANEOUS DETAILS

SHEET NO. 17
TOTAL SHEETS 20



CRUSHED STONE SURFACE

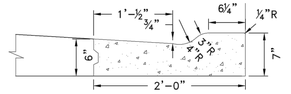
CONCRETE PAVEMENT



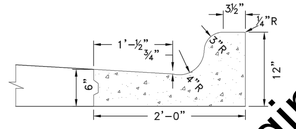
ASPHALT PAVEMENT

NOTES:
1. FOR NEW MANHOLE INSTALLATION, THE PAVEMENT REPAIR LIMITS SHALL BE A MINIMUM 8 FOOT SQUARE AROUND THE NEW MANHOLE.
2. FOR MANHOLE REHABILITATION FRAME AND CASTING WORK ONLY, SEE PAVEMENT REPAIR SPECIFICATION 02740.
3. FOR ALL OTHER MANHOLE REHABILITATION WORK REQUIRING EXCAVATION, THE PAVEMENT REPAIR LIMITS SHALL BE A MINIMUM 8 FOOT SQUARE AROUND THE MANHOLE TO A MINIMUM DEPTH OF 6" BELOW EXISTING SUBGRADE OR TO THE DEPTH OF THE REHABILITATION WORK AS SPECIFIED.

PAVEMENT REPAIR
SCALE: NONE



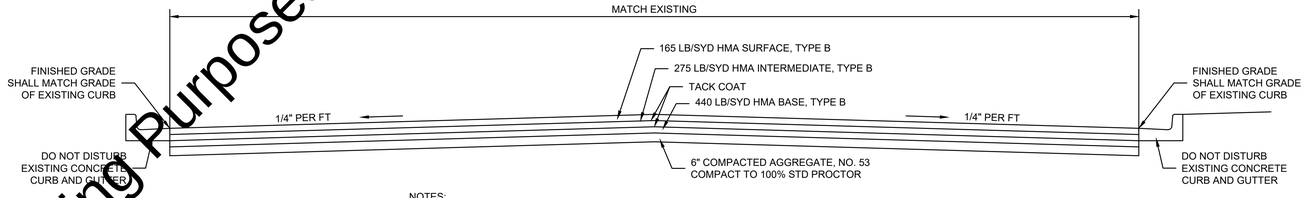
STANDARD DRIVEWAY CURB
COMB. CONC. CURB
& GUTTER TYPE "B"



STANDARD CURB
COMB. CONC. CURB
& GUTTER TYPE "B"

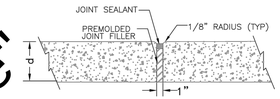
GENERAL NOTES:
1. CLASS "A" CONCRETE SHALL BE USED IN ALL WALKS AND APPROACHES.
2. LONGITUDINAL CONTRACTION JOINT IS REQUIRED ON APPROACHES WHERE DRIVEWAY WIDTH (W) EXCEEDS 14 FEET. PLACE JOINT AT CENTER OF APPROACH.
3. "CURING CONCRETE" PER INDIANA DEPARTMENT OF TRANSPORTATION (INDOT) STANDARD SPECIFICATIONS. EITHER USE A CURING COMPOUND IMMEDIATELY AFTER FINISHING OR COVER AND KEEP MOIST FOR 72 HOURS.

COMBINED CONCRETE CURB AND GUTTER
SCALE: NONE

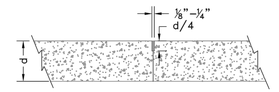


NOTES:
1. COMPACTION TESTS ARE REQUIRED ON ALL SUBGRADE AND RESULTS TO BE SUBMITTED TO THE SUPERINTENDENT OF PUBLIC WORKS.
2. REMOVE EXISTING PAVEMENT AND SUBGRADE OF SUFFICIENT DEPTH (MAX 14") TO PERMIT INSTALLATION OF NEW PAVEMENT AND AGGREGATE BASE
3. HMA = HOT MIX ASPHALT

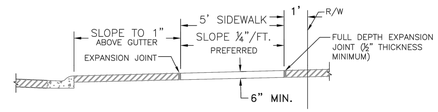
TYPICAL PAVEMENT CROSS SECTION
SCALE: NONE



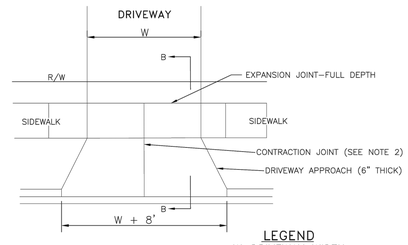
EXPANSION JOINT



CONTRACTION JOINT



SECTION B-B



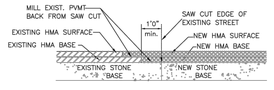
LEGEND
W-DRIVEWAY WIDTH
R/W-STREET RIGHT OF WAY

PLAN
RESIDENTIAL DRIVEWAY

FOR OTHER DRIVEWAYS, SUCH AS COMMERCIAL OR INDUSTRIAL, PLANS MUST BE APPROVED BY THE BOARD OF PUBLIC WORKS.

GENERAL NOTES:
1. CLASS "A" CONCRETE SHALL BE USED IN ALL WALKS AND APPROACHES.
2. LONGITUDINAL CONTRACTION JOINT IS REQUIRED ON APPROACHES WHERE DRIVEWAY WIDTH (W) EXCEEDS 14 FEET. PLACE JOINT AT CENTER OF APPROACH.
3. "CURING CONCRETE" PER INDIANA DEPARTMENT OF TRANSPORTATION (INDOT) STANDARD SPECIFICATIONS. EITHER USE A CURING COMPOUND IMMEDIATELY AFTER FINISHING OR COVER AND KEEP MOIST FOR 72 HOURS.

DRIVEWAYS
SCALE: NONE



NEW STREET JOINING EXISTING PAVEMENT
SCALE: NONE

SCALE VERIFICATION	DRAWN BY	JRW	NO.	DATE	INITIALS	REVISION DESCRIPTIONS	
BAR IS ONE INCH LONG ON ORIGINAL DRAWING	CHECKED BY	JEB					
	APPROVED BY	MEC					
	ISSUE DATE	SEPTEMBER 2017					
	PROJECT NUMBER	196217-04-001					

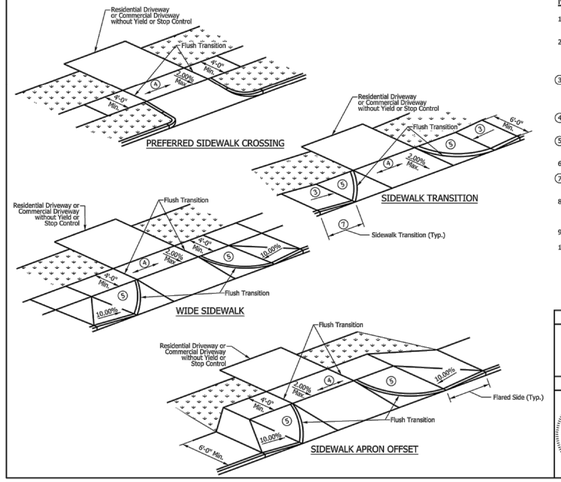
MEGAN E. CARR REGISTERED No. 10910636 STATE OF INDIANA PROFESSIONAL ENGINEER 09/27/2017
Megan E. Carr

WESSLER ENGINEERING
More than a Project™

SEWER REHABILITATION - SEWER REPLACEMENT
CITY OF WARSAW BOARD OF PUBLIC WORKS & SAFETY
WARSAW, IN

MISCELLANEOUS DETAILS

SHEET NO. 18
TOTAL SHEETS 20



NOTES:

1. All slopes are absolute rather than relative to the sidewalk or roadway grade. Slopes at least 0.50% less than the maximum are preferred.
2. A sidewalk driveway crossing shall only be used on a sidewalk at a residential driveway or a commercial driveway without yield or stop control. A curb ramp shall be used at all other crossings. See Standard Drawing Series E 604-SWCR for curb ramp details.
3. Where a sidewalk transition is used to lower or raise the sidewalk to connect with a residential driveway or commercial driveway without yield or stop control, the running slope of the transition shall be 8.33% maximum.
4. The grade of the sidewalk across the driveway shall not exceed the grade of the adjacent roadway.
5. The area between the driveway and a flared side or sidewalk transition shall match the driveway profile and transverse slope.
6. A turning space is not required at the top of a sidewalk transition.
7. Objects such as a utility cover, vault frame, and grating shall be placed outside a sidewalk transition.
8. A detectable warning surface shall not be placed at the crossings of a residential driveway. A detectable warning surface may be placed at the crossing of a commercial driveway without yield or stop control.
9. See Standard Drawing E 604-SDWK-01 and -02 for Sidewalk Details.
10. See Standard Drawing Series E 610-DRIV for drives.

INDIANA DEPARTMENT OF TRANSPORTATION

SIDEWALK DRIVEWAY CROSSING

SEPTEMBER 2016

STANDARD DRAWING NO. E 604-SDWK-03

REGISTERED — ELIZABETH W. PHILLIPS — No. 10200124 — STATE OF INDIANA — PROFESSIONAL ENGINEER

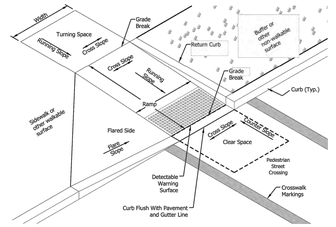
/s/ Elizabeth W. Phillips	03/16/16
DESIGN STANDARDS ENGINEER	DATE
/s/ Mark A. Miller	03/18/16
CHIEF ENGINEER	DATE

INDEX

SHEET NO.	SUBJECT
1	Curb Ramp Drawing Index and General Notes
2-3	Perpendicular Curb Ramp Typical Placement
4	Perpendicular Curb Ramp Component Details
5	One-Way-Directional Perpendicular Curb Ramp Typical Placement
6	One-Way-Directional Perpendicular Curb Ramp Component Details
7	Parallel Curb Ramps Typical Placement
8	Parallel Curb Ramp Component Details
9	Blended Transition Curb Ramp, Depressed Curb Ramp and Diagonal Curb Ramp Typical Placement
10	Blended Transition Curb Ramp Component Details
11	Median Cut-Through and Median Perpendicular Curb Ramp Typical Placement
12-13	Detectable Warning Surface Placement and Configuration
14	Detectable Warning Surface Details

GENERAL NOTES:

1. All slopes are absolute rather than relative to the sidewalk or roadway grade. Slopes at least 0.50% less than the maximum are preferred.
2. Ramp or Blended Transition. A ramp or blended transition shall be used to lower or raise the sidewalk to connect with the street or highway.
3. Turning Space. A turning space shall be provided at the top of a perpendicular ramp, bottom of a parallel ramp, or where the pedestrian travel requires a change in direction. A common turning space may be shared by adjacent ramps. The turning space shall have a minimum clear dimension of 4 ft x 4 ft. Where the turning space is constrained at the back of the sidewalk by a curb, retaining wall, building, or feature over 2 inches in height, the minimum clear dimension shall be 4 ft x 5 ft, with the 5-ft dimension in the direction of the ramp running slope.
4. Flared Side. A flared side shall be used adjacent to a walkable surface. A flared side may be used adjacent to a non-walkable surface. A flared side shall have a maximum slope of 10.00% measured parallel to the back of the curb.
5. Return Curb. A return curb is placed perpendicular to the roadway curb. A return curb may be used adjacent to a non-walkable surface. A return curb shall not be used adjacent to a walkable surface.
6. Clear Space. A clear space shall be provided beyond the bottom grade break of a curb ramp wholly contained within the crosswalk and wholly outside the parallel vehicular travel path. The clear space shall have a minimum clear dimension of 4 ft x 4 ft.
7. Detectable Warning Surface. A detectable warning surface shall be placed at each street, highway, or railroad crossing. A detectable warning surface shall extend a minimum of 2 ft in the direction of pedestrian travel and be placed the entire width of a ramp, blended transition, or turning space.
8. Running Slope. The running slope of a ramp, blended transition, or turning space shall be measured parallel to the direction of pedestrian travel.
   a. A running slope of 2.00% or less is considered level.
   b. A ramp shall have a maximum running slope of 8.33% but shall not require a ramp length to exceed 15 ft.
   c. A blended transition shall have a maximum running slope of 5.00%.
   d. A turning space shall have a maximum running slope of 2.00%.
9. Width. Unless otherwise noted, minimum width of a ramp, blended transition, or turning space, excluding flared sides or return curb, shall be 4 ft.
10. Grade Break. A grade break at the top and bottom of a ramp, blended transition, or turning space shall be perpendicular to the running slope. Grade breaks shall not be within the ramp, blended transition, turning space, or detectable warning surface. Grade breaks shall be flush. Vertical discontinuities shall not be greater than 1/2 in. Where a discontinuity is greater than 1/4 in. the surface shall be beveled with a slope not steeper than 1V:2H.
11. Cross Slope Exceptions. The cross slope of a ramp, blended transition, or turning space shall be measured perpendicular to the direction of pedestrian travel.
    a. The maximum cross slope at a pedestrian street crossing without yield or stop control shall be 5.00%.
    b. The maximum cross slope at a pedestrian street crossing with yield or stop control shall be 2.00%.
    c. The maximum cross slope at a midblock crossing shall be the established grade of the adjacent roadway.
12. Objects such as a utility cover, vault frame, and grating shall be placed outside the curb ramp.
13. Curb ramps shall be placed within the marked crosswalk area.
14. Drainage inlets should be located uphill from a curb ramp to prevent ponding in the path of pedestrian travel.



INDIANA DEPARTMENT OF TRANSPORTATION

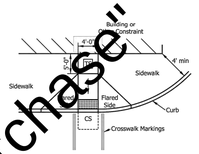
CURB RAMP DRAWING INDEX AND GENERAL NOTES

SEPTEMBER 2016

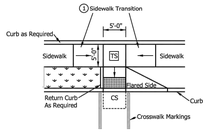
STANDARD DRAWING NO. E 604-SWCR-01

REGISTERED — ELIZABETH W. PHILLIPS — No. 10200124 — STATE OF INDIANA — PROFESSIONAL ENGINEER

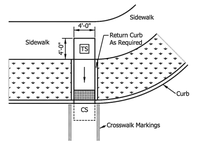
/s/ Elizabeth W. Phillips	03/15/16
DESIGN STANDARDS ENGINEER	DATE
/s/ Mark A. Miller	03/18/16
CHIEF ENGINEER	DATE



PERPENDICULAR CURB RAMP
ADJACENT WALKABLE SURFACE



TIERED PERPENDICULAR CURB RAMP



PERPENDICULAR CURB RAMP
ADJACENT NON-WALKABLE SURFACE

NOTES:

1. Where insufficient width between the curb and back of sidewalk prevent a standard perpendicular curb ramp running slope, a sidewalk transition may be used to lower the sidewalk grade. The sidewalk transition running slope shall not exceed 8.33%.
2. The turning space shall have a minimum clear dimension of 4 ft x 4 ft. Where the turning space is constrained at the back of the sidewalk, the minimum clear dimension shall be 4 ft x 5 ft, with the 5-ft dimension in the direction of the ramp running slope. Where a tiered perpendicular curb ramp is used, a constrained turning space shall have a minimum clear dimension of 5 ft x 5 ft.

LEGEND:

- Buffer or Other Non-Walkable Surface
- Ramp
- Detectable Warning Surface
- TR Turning Space
- CS Clear Space

INDIANA DEPARTMENT OF TRANSPORTATION

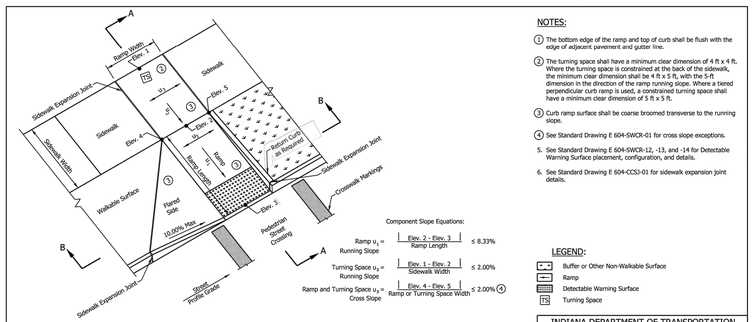
PERPENDICULAR CURB RAMP
TYPICAL PLACEMENT

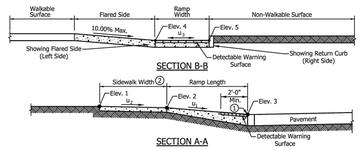
SEPTEMBER 2016

STANDARD DRAWING NO. E 604-SWCR-02

REGISTERED — ELIZABETH W. PHILLIPS — No. 10200124 — STATE OF INDIANA — PROFESSIONAL ENGINEER

/s/ Elizabeth W. Phillips	03/15/16
DESIGN STANDARDS ENGINEER	DATE
/s/ Mark A. Miller	03/18/16
CHIEF ENGINEER	DATE





SECTION B-B

SECTION A-A

NOTES:

1. The bottom edge of the ramp and top of curb shall be flush with the edge of adjacent pavement and gutter line.
2. The turning space shall have a minimum clear dimension of 4 ft x 4 ft. Where the turning space is constrained at the back of the sidewalk, the minimum clear dimension shall be 4 ft x 5 ft, with the 5-ft dimension in the direction of the ramp running slope. Where a tiered perpendicular curb ramp is used, a constrained turning space shall have a minimum clear dimension of 5 ft x 5 ft.
3. Curb ramp surface shall be coarse broomed transverse to the running slope.
4. See Standard Drawing E 604-SWCR-01 for cross slope exceptions.
5. See Standard Drawing E 604-SWCR-12, -13, and -14 for Detectable Warning Surface placement, configuration, and details.
6. See Standard Drawing E 604-CCS3-01 for sidewalk expansion joint details.

LEGEND:

- Buffer or Other Non-Walkable Surface
- Ramp
- Detectable Warning Surface
- TR Turning Space

INDIANA DEPARTMENT OF TRANSPORTATION

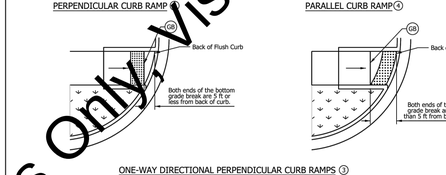
PERPENDICULAR CURB RAMP
COMPONENT DETAILS

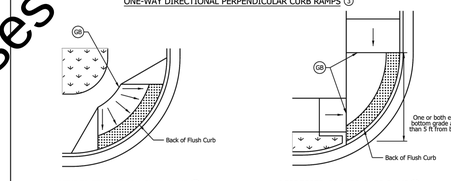
SEPTEMBER 2016

STANDARD DRAWING NO. E 604-SWCR-04

REGISTERED — ELIZABETH W. PHILLIPS — No. 10200124 — STATE OF INDIANA — PROFESSIONAL ENGINEER

/s/ Elizabeth W. Phillips	03/15/16
DESIGN STANDARDS ENGINEER	DATE
/s/ Mark A. Miller	03/18/16
CHIEF ENGINEER	DATE





NOTES:

1. A detectable warning surface shall be placed at each street, highway, or railroad crossing. See Standard Drawing E 604-SDWK-03 for a detectable warning surface placement at a sidewalk driveway crossing.
2. The detectable warning surface shall extend a minimum of 2 ft in the direction of pedestrian travel and extend the full width as shown. The detectable warning surface shall not be placed across a grade break.
3. Where the of the bottom grade break on a perpendicular curb ramp is 5 ft or less from the back of curb, the detectable warning surface shall be placed on the ramp within one dome spacing of the bottom grade break. Where the bottom grade break is more than 5 ft from the back of curb, the detectable warning surface shall be placed at the back of curb.
4. The detectable warning surface on a parallel curb shall be placed on the turning space at the flush transition between the street and turning space at the back of curb.
5. The detectable warning surface on a blended transition or depressed corner curb ramp shall be placed at the back of curb.
6. See Standard Drawing E 604-SWCR-14 where a concrete border is used as an edge restraint for a brick detectable warning surface.

LEGEND:

- Buffer or Other Non-Walkable Surface
- Detectable Warning Surface
- Ramp
- GB Grade Break

INDIANA DEPARTMENT OF TRANSPORTATION

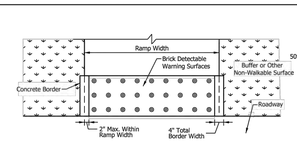
DETECTABLE WARNING SURFACE
PLACEMENT AND CONFIGURATION

SEPTEMBER 2016

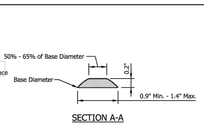
STANDARD DRAWING NO. E 604-SWCR-12

REGISTERED — ELIZABETH W. PHILLIPS — No. 10200124 — STATE OF INDIANA — PROFESSIONAL ENGINEER

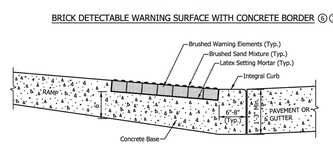
/s/ Elizabeth W. Phillips	03/15/16
DESIGN STANDARDS ENGINEER	DATE
/s/ Mark A. Miller	03/18/16
CHIEF ENGINEER	DATE



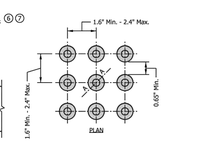
BRICK DETECTABLE WARNING SURFACE WITH CONCRETE BORDER 6 7



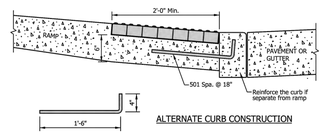
SECTION A-A



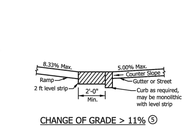
TYPICAL RAMP AND BRICK SURFACE CONSTRUCTION DETAIL



TRUNCATED DOMES



ALTERNATE CURB CONSTRUCTION



CHANGE OF GRADE > 11% 5

NOTES:

1. Detectable warning surface shall consist of truncated domes and shall be aligned in a square or radial grid pattern. Where truncated domes are arrayed radially, they may differ in diameter and center-to-center spacing within the ranges specified.
2. The detectable warning surface shall be manufactured to fit the radii. Field cutting shall not alter the truncated dome spacing between the adjacent panels outside of the allowable range.
3. The detectable warning surface shall contrast visually with adjacent surfaces, either light-on-dark or dark-on-light.
4. The detectable warning surface shall extend a minimum of 2 ft in the direction of pedestrian travel and extend the full width as shown. The detectable warning surface shall not be placed across a grade break.
5. The maximum counter slope of the gutter or street at the bottom of the ramp shall be 5.00%. Where the algebraic difference between the running slope and the counter slope exceeds 11%, a 2-ft minimum level strip should be provided at the bottom of the ramp.
6. Where concrete border is used for forming, the border shall be cast monolithically with the curb ramp concrete. The concrete border shall not exceed 2 in. within the ramp width.
7. Where forming other than a concrete border is used, the edge restraint shall not encroach upon the ramp width.

INDIANA DEPARTMENT OF TRANSPORTATION

DETECTABLE WARNING SURFACE DETAILS

SEPTEMBER 2016

STANDARD DRAWING NO. E 604-SWCR-14

REGISTERED — ELIZABETH W. PHILLIPS — No. 10200124 — STATE OF INDIANA — PROFESSIONAL ENGINEER

/s/ Elizabeth W. Phillips	03/15/16
DESIGN STANDARDS ENGINEER	DATE
/s/ Mark A. Miller	03/18/16
CHIEF ENGINEER	DATE

SCALE VERIFICATION	DRAWN BY	JRW	NO.	DATE	INITIALS	REVISION DESCRIPTIONS	
BAR IS ONE INCH LONG ON ORIGINAL DRAWING	CHECKED BY	JEB					
	APPROVED BY	MEC					
	ISSUE DATE	SEPTEMBER 2017					
	PROJECT NUMBER	196217-04-001					

MEGAN E. CARR — REGISTERED — No. 10910636 — STATE OF INDIANA — PROFESSIONAL ENGINEER — 09/27/2017

Megan E. Carr

WESSLER ENGINEERING
More than a Project™

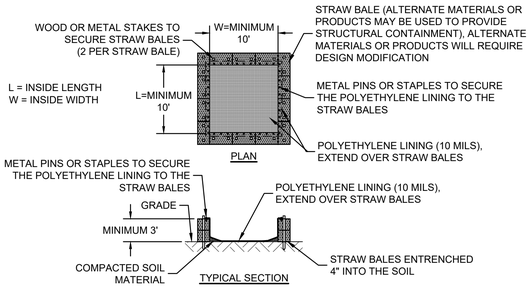
SEWER REHABILITATION - SEWER REPLACEMENT

CITY OF WARSAW BOARD OF PUBLIC WORKS & SAFETY
WARSAW, IN

MISCELLANEOUS DETAILS

SHEET NO. 19

TOTAL SHEETS 20

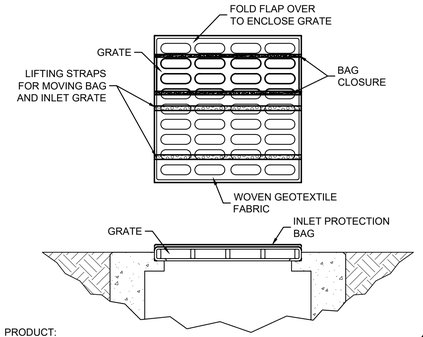


NOTES:
1. LOCATE WASHOUTS AT LEAST 50' FROM ANY CREEKS, WETLANDS, DITCHES, KARST FEATURES, OR STORM DRAIN/CONVEYANCES.

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. MAINTENANCE REQUIREMENTS PROVIDED IN SPECIFICATIONS.

CONCRETE WASHOUT
SCALE: NONE

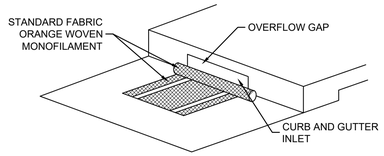


PRODUCT:
1. DANDY BAG, OR APPROVED EQUAL.

INSTALLATION:
1. THE EMPTY INLET PROTECTION BAG SHOULD BE PLACED OVER THE GRATE WHILE 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 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 AT LEAST ONCE EVERY 7 CALENDAR DAYS.

INLET PROTECTION BAG
SCALE: NONE



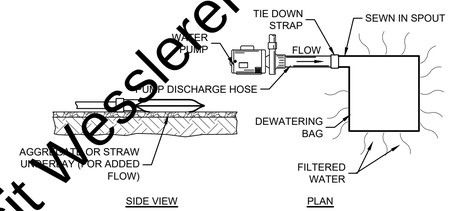
DESIGN CONFORMS TO ALL SHAPES OF CONCRETE CURBS

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/M² (GAL/MIN/FT²)	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

SEASONAL SOIL PROTECTION CHART

STABILIZATION PRACTICE	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
PERMANENT SEEDING			A						A			
DORMANT SEEDING	B										B	
TEMPORARY SEEDING	C, E							E		D		
SODDING			F						F			
MULCHING	G											

A. = KENTUCKY BLUEGRASS 40 LB/ACRE
B. = KENTUCKY BLUEGRASS 210 LB/ACRE
C. = SPRING OATS 100 LB/ACRE (1" PLANTING DEPTH)
D. = WHEAT OR RYE 150 LB/ACRE (1" - 1.5" PLANTING DEPTH)
E. = ANNUAL RYEGRASS 40 LB/ACRE (1/4" PLANTING DEPTH)
F. = SOD
G. = ANCHORED STRAW/HAY (2 TONS/ACRE) OR WOOD FIBER/CELLULOSE (1 TON/ACRE)

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.

SCALE VERIFICATION	DRAWN BY	JRW
BAR IS ONE INCH LONG ON ORIGINAL DRAWING	CHECKED BY	JEB
	APPROVED BY	MEC
	ISSUE DATE	SEPTEMBER 2017
	PROJECT NUMBER	196217-04-001

NO.	DATE	INITIALS	REVISION DESCRIPTIONS

MEGAN E. CARR REGISTERED No. 10910636 STATE OF INDIANA PROFESSIONAL ENGINEER 09/27/2017
Megan E. Carr

WESSLER ENGINEERING
More than a Project™

SEWER REHABILITATION - SEWER REPLACEMENT
CITY OF WARSAW BOARD OF PUBLIC WORKS & SAFETY
WARSAW, IN

EROSION CONTROL DETAILS

SHEET NO. 20
TOTAL SHEETS 20