

# FALL CREEK REGIONAL WASTE DISTRICT SANITARY SEWER REHABILITATION PROJECT PHASE II

## PENDLETON, INDIANA



### FCRWD MEMBERS

MARK A. JABLONSKI	- PRESIDENT
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GREGORY L. VALENTINE	- TREASURER
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JACK C. WEIST	- BOARD MEMBER
ALBERT B. STEWART	- BOARD MEMBER
TERESA HUTTON	- GENERAL MANAGER
STEVE UNGER	- ATTORNEY

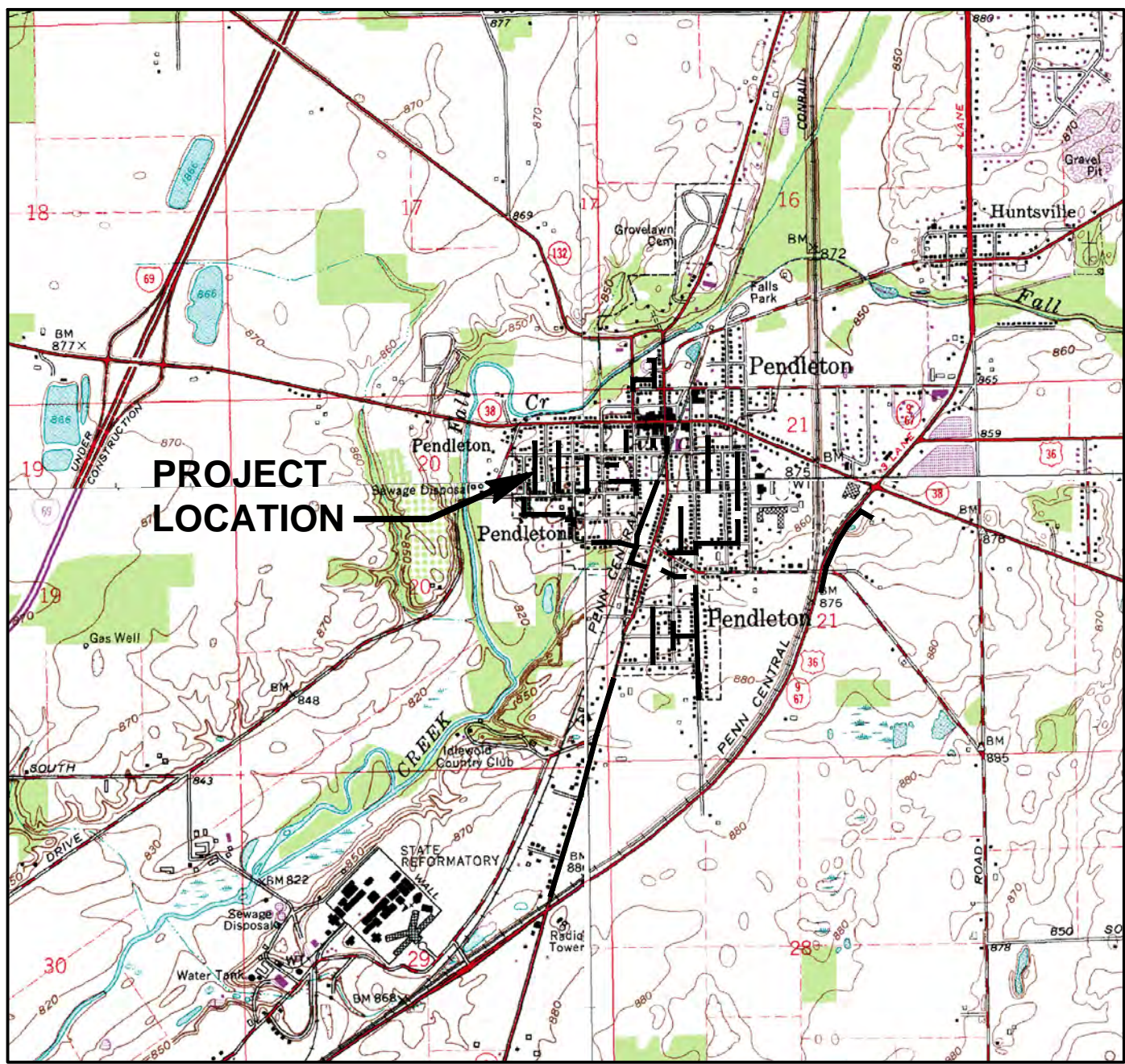


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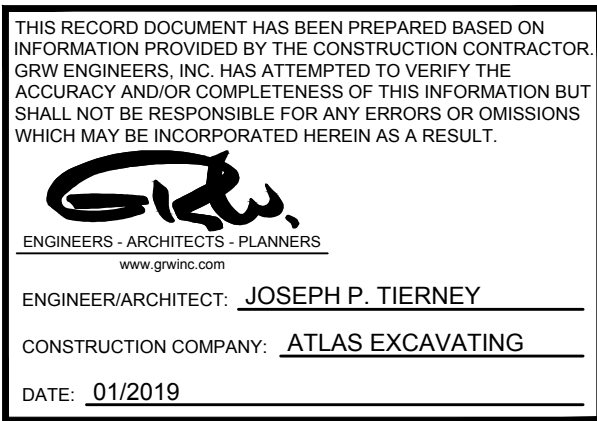
This document, originally issued, sealed, and signed by Joseph P. Tierney, Indiana Professional Engineer, No. 19300407, on November 2017, shall not be used in lieu of a certified document.

MARCH 2017



SCALE: 1" = 2000'

PLAN SET IS FULL SCALE ON 24"x36"  
AND HALF SCALE ON 12"x18"



SRF NO. WW16074803  
GRW PROJECT NO. 4447-24



FILE NAME: G:\4447-FCRMD-2015\Working Drawings\AutoCAD\REHABILITATION PHASE II\4447-24-G-01.dwg

PRINTED: 3/11/2017 @ 2:07PM

GENERAL NOTES:

1.

THE FOLLOWING GENERAL NOTES ARE APPLICABLE TO THE ENTIRE SET OF PLANS, AND ARE NOT SHOWN ON EACH INDIVIDUAL SHEET. HOWEVER, THIS DOES TO RELIEVE THE CONTRACTOR OF ANY RESPONSIBILITY TO PROVIDE THESE ITEMS FOR ALL AREAS.
2.

PROPERTY LINES AND RIGHTS-OF-WAY SHOWN ARE BASED ON DEED RESEARCH OF PUBLIC RECORDS. FIELD SURVEYING HAS NOT BEEN COMPLETED TO VERIFY EXACT LOCATIONS.
3.

ALL DISTURBED AREAS, INCLUDING BUT NOT LIMITED TO STREETS, DRIVES, WALKS, FENCES, LAWNS, ETC. SHALL BE RESTORED TO CONDITIONS EQUAL TO OR BETTER THAN THOSE PRIOR TO CONSTRUCTION.
4.

BASELINE STATIONING IS ALONG THE CENTERLINE OF PROPOSED SEWER.
5.

THE DISTRICT ASSUMES NO RESPONSIBILITY FOR THE LACK OF LOCATION OR MISSED LOCATION OF EXISTING UTILITIES.
6.

THE CONTRACTOR SHOULD VERIFY THE EXISTING CONDITIONS TO HIS SATISFACTION PRIOR TO BEGINNING ANY EXCAVATION. INDIANA UNDERGROUND UTILITIES PROTECTION SERVICE SHALL BE NOTIFIED AT LEAST 72 HOURS PRIOR TO BEGINNING ANY WORK. INDIANA UNDERGROUND UTILITIES PROTECTION SERVICE TELEPHONE IS 811.
7.

ALL SIZES AND LOCATIONS OF EXISTING UTILITIES ARE BASED ON BEST INFORMATION AVAILABLE. HOWEVER, THE ENGINEER DOES NOT GUARANTEE OR ASSURE THAT SUCH INFORMATION IS TRUE OR APPROXIMATE. THE CONTRACTOR SHALL DETERMINE WHICH UTILITIES MAY CONFLICT WITH HIS WORK AND VERIFY THEIR LOCATIONS, SIZES, AND INVERTS, ETC. ADJUST HIS WORK ACCORDINGLY, AND NOTIFY THE ENGINEER OF ANY SUCH CONFLICT. THE CONTRACTOR SHALL REFER TO SPECIFICATIONS RELATIVE TO THE ABOVE.
8.

THE CONTRACTOR IS RESPONSIBLE FOR RELOCATING, ADJUSTING, AND/OR HOLDING ANY UTILITY LINE AND/OR ASSOCIATED SERVICE POLE, OR DOWN GUY AT HIS OWN EXPENSE. HE SHALL ALSO BE RESPONSIBLE TO CONTACT ANY UTILITY OWNER AS NECESSARY TO RESOLVE ALL UTILITY CONFLICTS INCURRED DURING THE COMPLETION OF HIS CONSTRUCTION OPERATIONS.
9.

CONTRACTOR SHALL USE CAUTION DURING THEIR WORK SO AS TO NOT DAMAGE EXISTING UTILITIES, ETC. CONTRACTOR IS RESPONSIBLE FOR REPAIR AND/OR REPLACEMENT OF ANY UTILITIES DAMAGED AS A RESULT OF CONTRACTOR'S CONSTRUCTION OPERATIONS AND PRACTICES.
10.

CONNECTIONS OF ROOF DRAINS, FOUNDATION DRAINS AND ANY OTHER CLEAN WATER CONNECTIONS TO THE SANITARY SEWER SYSTEMS ARE PROHIBITED.
11.

LIMITS OF CONSTRUCTION SHALL BE MAINTAINED WITHIN PERMANENT, TEMPORARY EASEMENTS, AND RIGHT OF WAY AS SHOWN ON PLANS.
12.

ALL INFORMATION REGARDING HORIZONTAL AND VERTICAL LOCATIONS OF THE EXISTING SEWERSTOP OF CASTING AND SLOPES ARE BASED ON THE BEST INFORMATION AVAILABLE. THE ENGINEER DOES NOT GUARANTEE OR ASSURE THAT SUCH INFORMATION IS TRUE OR ACCURATE. THE CONTRACTOR SHALL FIELD VERIFY THOSE ELEVATIONS, ETC. AND ADJUST HIS WORK ACCORDINGLY TO MAINTAIN POSITIVE DOWN HILL SLOPE ON THE NEW SEWERS TO AT LEAST MATCH THE EXISTING SLOPE RELATIVE TO THE VERIFIED ELEVATIONS, AND NOTIFY THE ENGINEER OF ANY SUCH CHANGE FOR APPROVAL.
13.

THE CONTRACTOR IS RESPONSIBLE FOR TRAFFIC CONTROL. TRAFFIC CONTROL SHALL CONFORM TO APPLICABLE LOCAL/STATE STANDARDS.
14.

CONTRACTOR SHALL NOTIFY THE TOWN OF PENDLETON AND RESIDENTS 48 HOURS PRIOR TO TEMPORARILY CLOSING STREETS OR PRIVATE DRIVEWAYS. CONTRACTOR SHALL BE RESPONSIBLE FOR CONTACTING AFFECTED UTILITIES, TRASH PICK-UP SERVICES, SCHOOL DISTRICT, AND EMERGENCY & LAW ENFORCEMENT AUTHORITIES REGARDING SAID CLOSURES. AFFECTED PRIVATE DRIVEWAYS SHALL NOT BE SHUT DOWN LONGER THAN 8 HOURS. TRAFFIC SHALL BE BARRICADED FROM DRIVEWAY OR DRIVEWAY SHALL BE STEEL PLATE SPANNED TO MINIMIZE CLOSURES.
15.

CONTRACTOR SHALL REMOVE AND REPLACE ALL DRIVEWAY CULVERTS AFFECTED BY CONSTRUCTION WITH NEW DRIVEWAY CULVERT PIPING OF IN-KIND MATERIALS PER TOWN OF PENDLETON STANDARDS. CONTRACTOR SHALL ALSO PROVIDE TOWN APPROVED END SECTIONS ON EACH REPLACED CULVERT. THE CONTRACTOR SHALL OBTAIN THE ACTUAL INVERT ELEVATIONS OF EACH CULVERT TO BE REMOVED AND SUPPLY ELEVATIONS TO THE R.P.R. THE CONTRACTOR SHALL THEN PLACE THE NEW DRIVEWAY CULVERT AS CLOSE AS POSSIBLE TO THE FORMER INVERT ELEVATIONS AND PROVIDE POSITIVE DRAINAGE OF THE RECONSTRUCTED DITCH LINE.
16.

CONTRACTOR SHALL CLEAN STREETS OF CONSTRUCTION DEBRIS DAILY TO THE SATISFACTION OF THE OWNER AND ENGINEER. CONTRACTOR SHALL FURTHER ENSURE THAT AT LEAST ONE LANE OF TRAFFIC IS OPEN AT ALL TIMES DURING CONSTRUCTION ALONG ROADWAYS UNLESS THE CONTRACTOR HAS WRITTEN APPROVAL AND AN APPROVED TRAFFIC MAINTENANCE PLAN FROM THE TOWN.
17.

CONTRACTOR SHALL BE RESPONSIBLE FOR MONITORING SANITARY FLOW AND PROVIDING BYPASS PUMPING AND/OR SUPPLEMENTAL STORAGE AS REQUIRED DURING CONSTRUCTION OPERATIONS. SUCH FLOW SHALL BE MONITORED SO AS NOT TO ALLOW SEWAGE BACK-UP WHICH MAY CAUSE PROPERTY DAMAGE. THE CONTRACTOR IS FULLY RESPONSIBLE FOR ANY DAMAGE INCURRED AND MUST MAKE RESTITUTION WITH ANY AFFECTED PROPERTY OWNER(S). CONTRACTOR SHALL PROVIDE CONTINUOUS ON-SITE SUPERVISION OF ANY BYPASS PUMPING OPERATIONS THAT OCCUR DURING CONSTRUCTION & NON-CONSTRUCTION HOURS. PROPOSED BYPASS SYSTEM SHALL INCLUDE EMERGENCY STANDBY/BACK-UP PROVISIONS AND SHALL BE APPROVED BY THE OWNER AT LEAST TWO (2) FULL WORKING DAYS IN ADVANCE OF INITIATING ANY BYPASS OPERATIONS. CONTRACTOR SHALL COORDINATE BYPASS PUMPING EFFORTS WITH FALL CREEK REGIONAL WASTE DISTRICT.
18.

THE GRAVITY SEWER PIPE LENGTHS SHOWN ON THE DRAWING ARE MEASURED FROM CENTER OF MANHOLE TO CENTER OF CONSECUTIVE MANHOLES.
19.

ALL WORK SHALL CONFORM TO THE FALL CREEK WASTE DISTRICT STANDARDS FOR DESIGN AND CONSTRUCTION OF SANITARY SEWERS UNLESS OTHERWISE NOTED.

PROPOSED SANITARY LATERALS:

- (DIST) A

- EXISTING LATERAL TO BE ABANDONED
- (DIST) B

- CONNECT LATERAL TO EXISTING OR REHABBED SEWER MAIN
- (DIST) C

- DIG UP AND CAP/PLUG CONNECTION TO EXISTING SEWER MAIN
- (A)

- EXISTING PIPE TO BE ABANDONED IN PLACE

EXISTING LEGEND

	EXISTING BENCHMARK		EXISTING GAS STOP
	EXISTING CATCH BASIN		EXISTING GAS VALVE
	EXISTING CABLE BOX		EXISTING GUY WIRE
	EXISTING CONTROL POINT		EXISTING GRAVE STONE
	EXISTING DECIDUOUS TREE		EXISTING LIGHT POLE
	EXISTING ELECTRICAL BOX		EXISTING MAILBOX
	EXISTING ELECTRIC METER		EXISTING TELEPHONE MANHOLE
	EXISTING ELECTRIC TRANSFORMER		EXISTING PKNAIL FOUND
	EXISTING FIRE HYDRANT		EXISTING PINE TREE
	EXISTING FLAG POLE		EXISTING POWER POLE
	EXISTING FIBER OPTIC BOX		EXISTING SIGN
	EXISTING GAS METER		EXISTING SHRUB
	EXISTING GAS MARKER		EXISTING TEMP BENCHMARK
	EXISTING GAS PRESSURE VALVE		EXISTING TELEPHONE BOX
	ROAD ☿		EXISTING TELEPHONE MARKER
	EXISTING DITCH		EXISTING TRAFFIC POLE
	EXISTING POWER/ELECTRIC		EXISTING VALVE VAULT
	EXISTING FENCE		EXISTING WATER METER
	EXISTING NATURAL GAS		EXISTING WATER VALVE
	EXISTING GUARDRAIL		EXISTING MANHOLE
	EXISTING GRADE (PROFILE)		EXISTING ELECTRIC MANHOLE
	EXISTING PROPERTY LINE		EXISTING FIBER OPTIC MANHOLE
	EXISTING RAILROAD		EXISTING SANITARY MANHOLE
	EXISTING CABLE TV		EXISTING STEAM MANHOLE
	EXISTING TELEPHONE LINE		EXISTING STORM MANHOLE
	EXISTING FIBER OPTIC LINE		DUCTILE IRON
	EXISTING WATER MAIN		RESTRAINED JOINT DUCTILE IRON
	EXISTING WATER'S EDGE		SOIL BORING
	EXISTING RIGHT-OF-WAY		
	EXISTING SANITARY SEWER		
	EXISTING SANITARY SEWER LATERAL		
	EXISTING STORM SEWER		

PROPOSED LEGEND - SEE PLAN AND PROFILE SHEETS



UTILITIES			
DESCRIPTION			
<b>WATER, PUBLIC WORKS AND STREETS</b> PENDLETON UTILITIES 100 WEST STATE STREET PENDLETON, IN 46064 765-208-0094 DONNIE MEYER 765-208-0093 JEFF BARGER	<b>GAS</b> VECTREN ENERGY 2001 REV. J.T. MENIFEE STREET ANDERSON, IN 46016 765-620-0747 BRIAN HARGER	<b>PHONE</b> FRONTIER 19845 NORTH U.S. 31 WESTFIELD, IN 46074 317-896-6005 STEVE COSTLOW	<b>SEWER</b> FALL CREEK REGIONAL WASTE DISTRICT 9378 S. COUNTY ROAD 650 WEST PENDLETON, IN 46064 765-778-7544 TIM MCCURDY
<b>ELECTRIC</b> PENDLETON UTILITIES 100 WEST STATE STREET PENDLETON, IN 46064 765-208-0104 CRAIG SWITZER	<b>CABLE</b> COMCAST CABLEVISION 9750 E. 105TH STREET, STE. 1600 NOBLESVILLE, IN, 46060 317-774-3384 MATT STRINGER	<b>PHONE</b> AT&T INDIANA 241 E. MARKET STREET HUNTINGTON, IN 46750 260-358-4507 CHRIS CARTWRIGHT	<b>FIBER OPTIC</b> 9 STAR COMMUNICATIONS (317) 326-3131

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JOSEPH P. TIERNEY  
REGISTERED  
No.  
19300407  
STATE OF  
INDIANA  
PROFESSIONAL ENGINEER

GRW PROJECT NO. 4447-24

SRF NO. WW18074803

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GENERAL NOTES AND INDEX

SEWER REHABILITATION PROJECT PHASE II

TOWN OF PENDLETON, INDIANA

DESIGNED: GWL

DRAWN: GCR

REVIEWED: JPT

APPROVED: JPT

REVISIONS

DATE

BY

DESCRIPTION

NO.

SCALE CHECK

THIS MARK SHOULD MEASURE EXACTLY 1" WHEN PLOTTED

DATE

MARCH 2017

SCALE

1"=30'

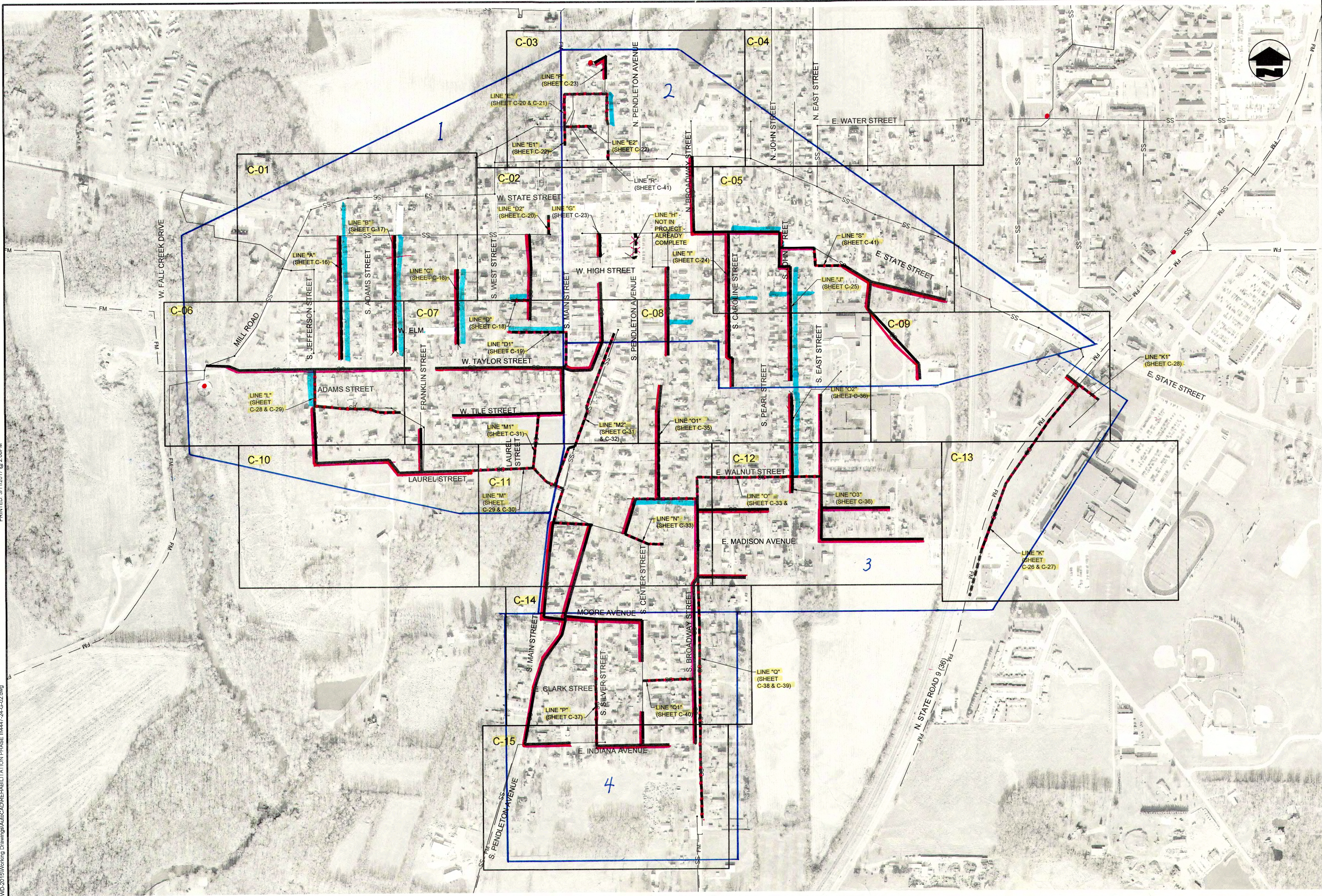
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G-01



PRINTED: 3/11/2017 @ 2:08PM

FILE NAME: G:\4447-FORWD-2015\Working Drawings\AutoCAD\REHABILITATION PHASE II\4447-24-G-02.dwg



- SANITARY SEWER MAIN TO BE CIPP LINED
- MAIN LINES COMPLETED
- CONSTRUCTION WORK ZONES
- ALLEYS RESURFACED

DRAWING INDEX

JOSEPH P. TIERNEY  
No. 19300407  
STATE OF INDIANA  
PROFESSIONAL ENGINEER

GRW PROJECT NO. 4447-24

SRF NO. WW6074803

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DRAWING INDEX

SEWER REHABILITATION PROJECT PHASE II  
TOWN OF PENDLETON, INDIANA

DESIGNED	GWL	CAB	JPT	JPT
BY				
DATE				

REVISIONS

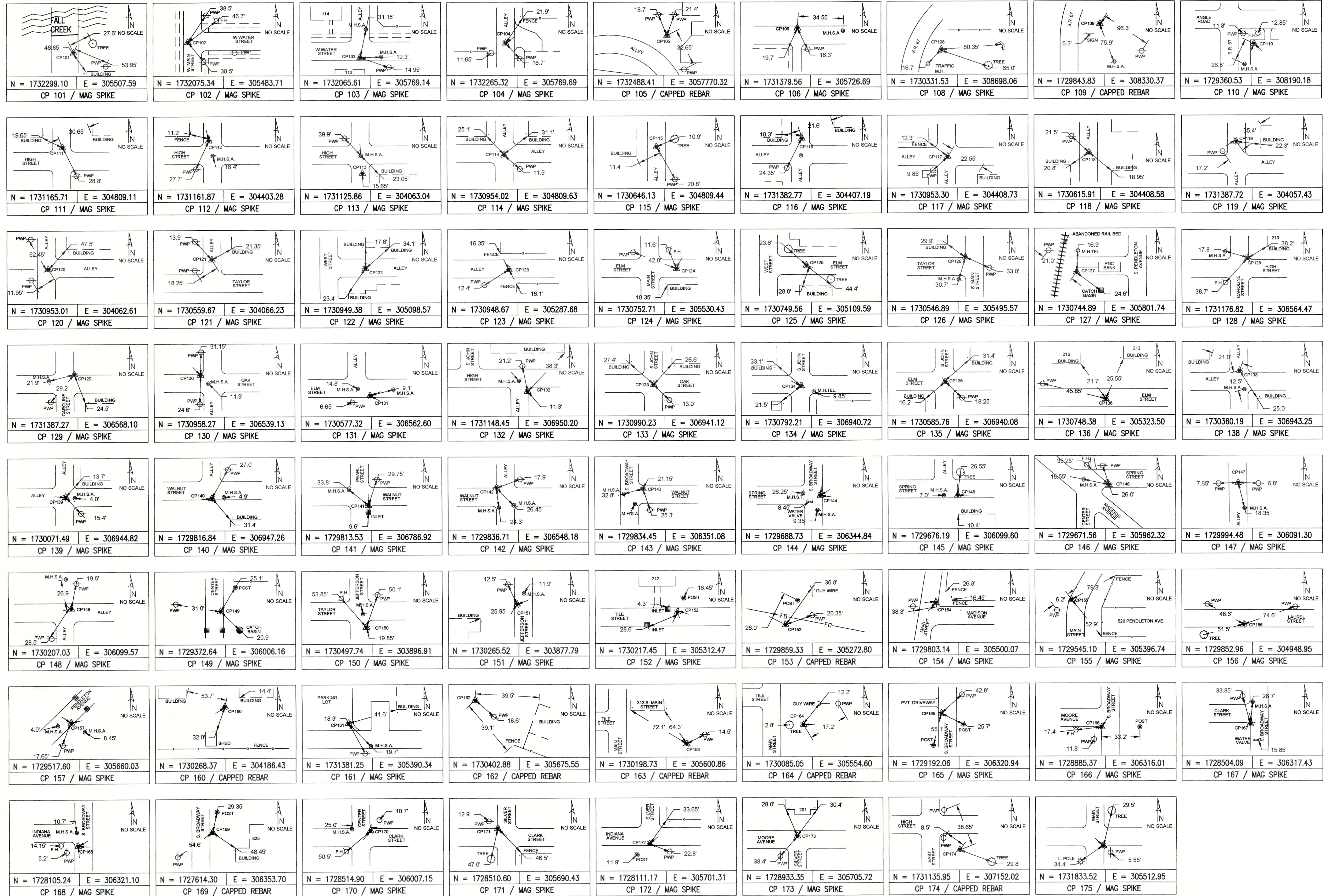
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DATE: MARCH 2017

SCALE: N.T.S.

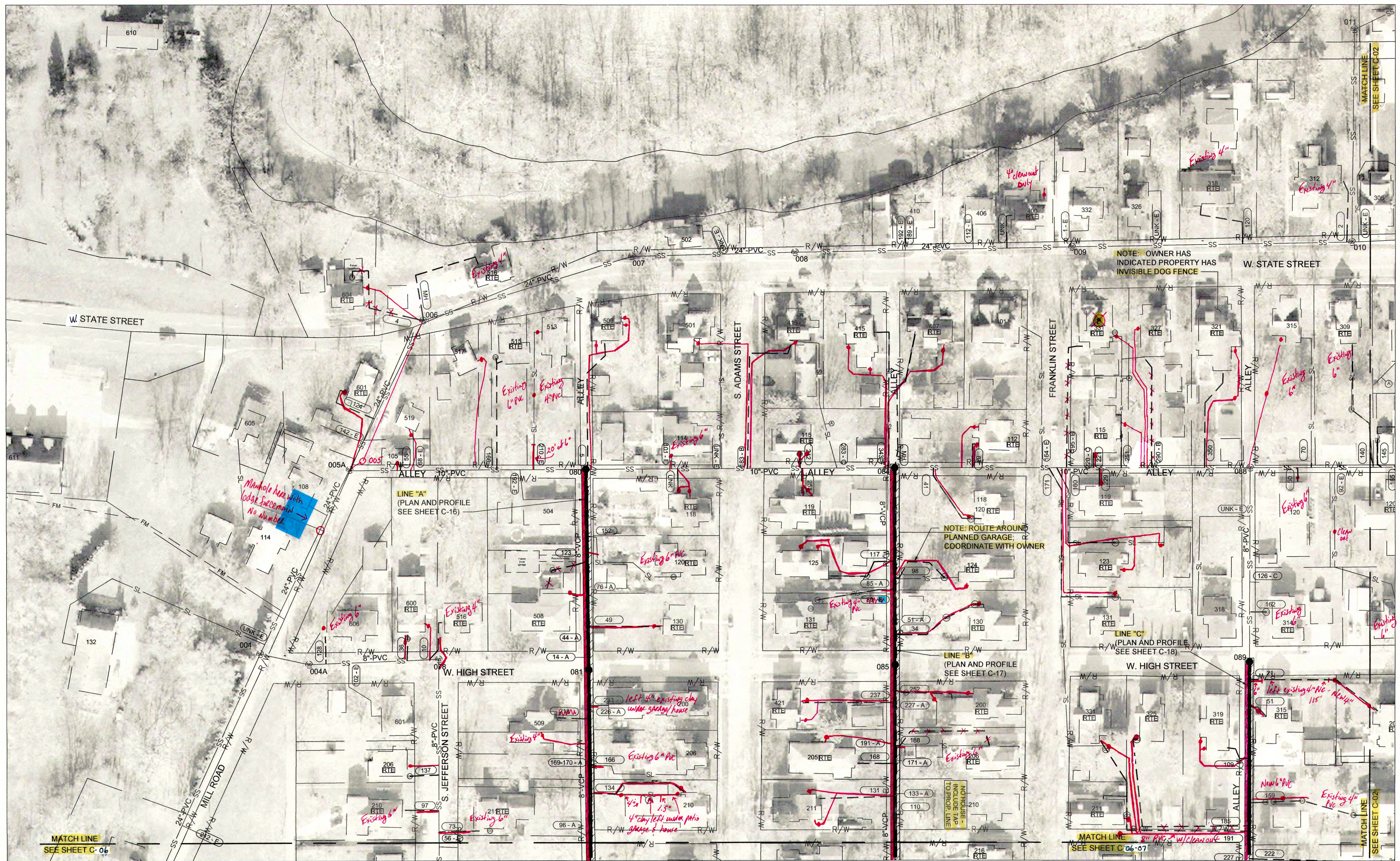
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DESIGNED	DRAWN	CHECKED	APPROVED
BY	DATE	DATE	DATE
DATE	DATE	DATE	DATE
DATE	DATE	DATE	DATE





NOTES:

- ALL LATERALS AND TAP LOCATIONS ARE BASED ON BEST INFORMATION AVAILABLE. CONTRACTOR SHALL FIELD VERIFY LOCATIONS OF LATERAL CONNECTIONS AND WHETHER LATERAL PIPES ARE ACTIVE OR ABANDONED BEFORE RECONNECTING OR ABANDONING THE CONNECTIONS.
- UTILITY LOCATIONS ARE NOT SHOWN FOR LATERAL REPLACEMENT WORK. CONTRACTOR IS RESPONSIBLE FOR FIELD LOCATING ALL UTILITIES AND ADJUSTING PROPOSED LATERAL ROUTES AS NEEDED TO AVOID CONFLICTS.
- FOR LATERAL REPLACEMENTS, CONTRACTOR SHALL FIRST VERIFY LOCATION OF EXISTING LATERALS & UTILITIES, THEN MEET WITH DISTRICT, ENGINEER AND PROPERTY OWNER TO DETERMINE ACTUAL ROUTE OF NEW LATERAL TO BE INSTALLED.
- LATERAL REPLACEMENTS CONNECTING TO MAINS TO BE CIPP LINED MUST BE COMPLETED AFTER CIPP LINER IS IN PLACE SO THAT SADDLE CAN CONNECT DIRECTLY TO CIPP.

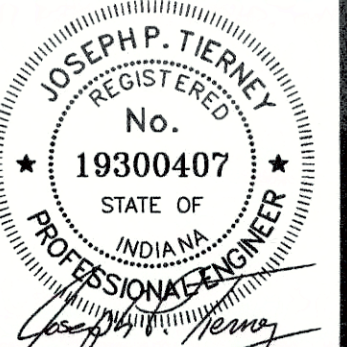
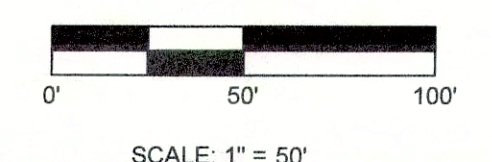
LEGEND

SS XX"	EXISTING SANITARY SEWER MAIN
SS #	EXISTING SANITARY SEWER MANHOLE
SS #	MANHOLE NUMBER
SS	SANITARY SEWER MAIN TO BE CIPP LINED
SS	SANITARY SEWER MAIN TO DIG AND REPLACED (SEE PLAN & PROFILE SHEETS)
SS	SANITARY MANHOLE TO BE REPLACED OR REHABILITATED (SEE SCHEDULE ON SHEET C-43)
SS	RIGHT TO ENTER DOCUMENT SIGNED BY PROPERTY OWNER

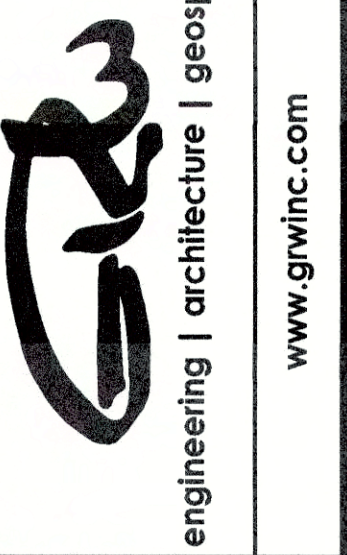
P	PLUMBING IN HOME TO BE RE-ROUTED BY DISTRICT
A	EXISTING PIPE SEGMENT TO BE ABANDONED
SL	EXISTING SANITARY SEWER LATERAL
CO	EXISTING SANITARY SEWER CLEANOUT
SS	SANITARY LATERAL REPLACEMENT
UNK	DISTANCE UNKNOWN
MH	EXISTING LATERAL TO BE CONNECTED TO EXISTING MANHOLE

xxx	EXISTING TAP LOCATION TO BE RECONNECTED - DISTANCE FROM MANHOLE
xxx - A	EXISTING TAP LOCATION TO BE ABANDONED
xxx - B	NEW TAP LOCATION TO BE ESTABLISHED
xxx - C	EXISTING TAP LOCATION TO BE DUG UP AND CAPPED/PLUGGED
xxx - E	EXISTING LATERAL CONNECTION - NO WORK NEEDED
xxx - R	DIG UP AND RECONNECT EXISTING PVC LATERAL TO CIPP LINED MAIN

NOTE: SOURCE OF 2015 AERIAL IMAGERY IS FROM MADISON COUNTY GIS.



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SRF NO. WW16074803  
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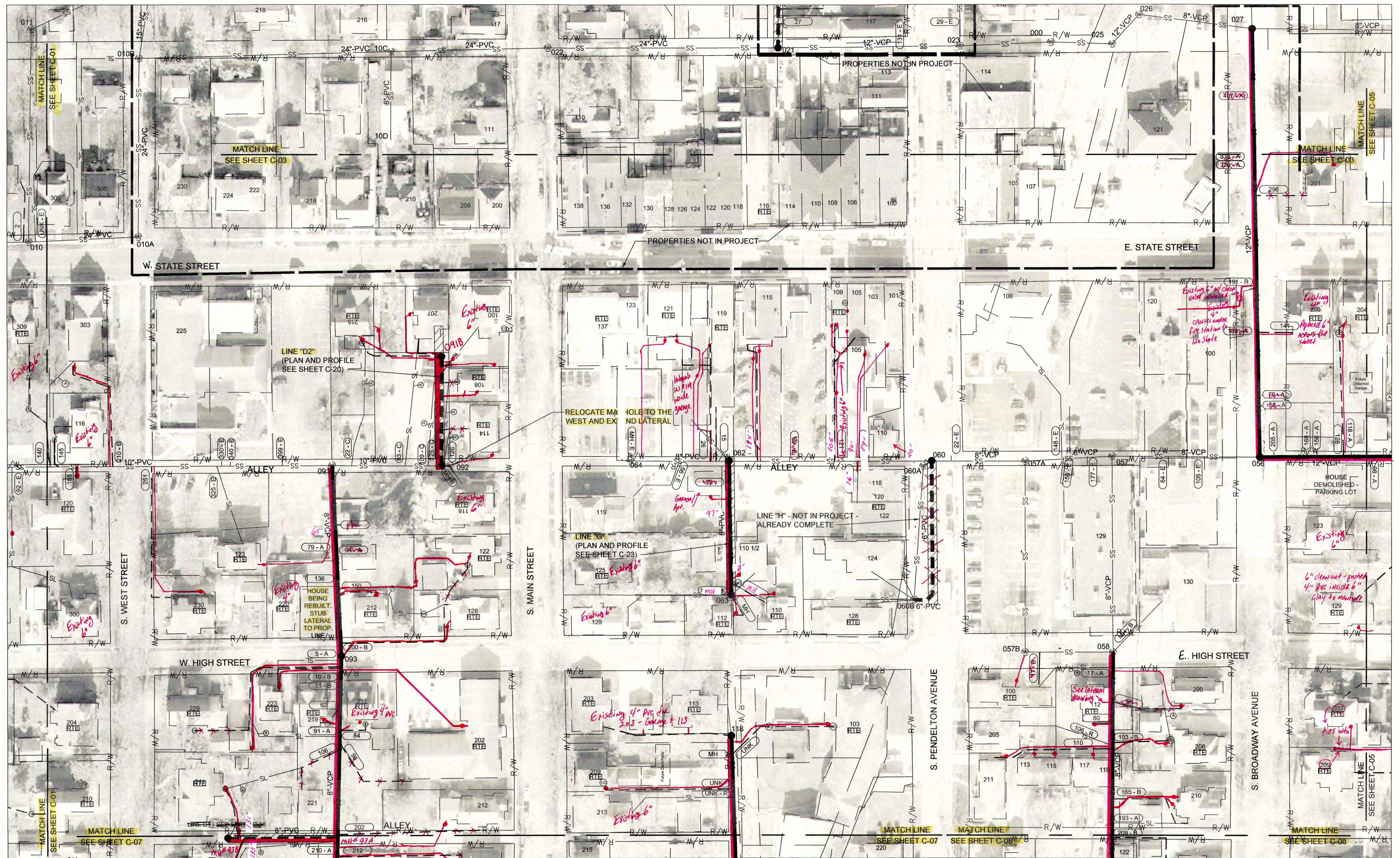


SANITARY SEWER  
REHABILITATION PLAN  
SEWER REHABILITATION PROJECT PHASE II  
TOWN OF PENDLETON, INDIANA

REVISIONS	DATE	BY	DATE	BY	DATE	BY
1						
2						
3						
4						
5						
6						
7						
8						
9						
10						

DATE: MARCH 2017  
SCALE: 1"=50'  
SHEET NO: C-01





NOTES:

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- LATERAL REPLACEMENTS CONNECTING TO MAINS TO BE CIPP LINED MUST BE COMPLETED AFTER CIPP LINER IS IN PLACE SO THAT SADDLE CAN CONNECT DIRECTLY TO CIPP.

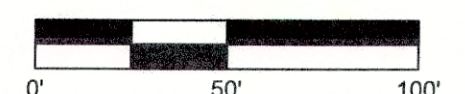
LEGEND

- SS XX" EXISTING SANITARY SEWER MAIN
- SS # EXISTING SANITARY SEWER MANHOLE
- MANHOLE NUMBER
- SANITARY SEWER MAIN TO BE CIPP LINED
- SANITARY SEWER MAIN TO BE DIG AND REPLACED (SEE PLAN & PROFILE SHEETS)
- SANITARY MANHOLE TO BE REPLACED OR REHABILITATED (SEE SCHEDULE ON SHEET C-43)
- RT# RIGHT TO ENTER DOCUMENT SIGNED BY PROPERTY OWNER

- (P) PLUMBING IN HOME TO BE RE-ROUTED BY DISTRICT
- (A) EXISTING PIPE SEGMENT TO BE ABANDONED
- EXISTING SANITARY SEWER LATERAL
- (CO) EXISTING SANITARY SEWER CLEANOUT
- SANITARY LATERAL REPLACEMENT
- UNK DISTANCE UNKNOWN
- MH EXISTING LATERAL TO BE CONNECTED TO EXISTING MANHOLE

- xxx EXISTING TAP LOCATION TO BE RECONNECTED - DISTANCE FROM MANHOLE
- xxx - A EXISTING TAP LOCATION TO BE ABANDONED
- xxx - B NEW TAP LOCATION TO BE ESTABLISHED
- xxx - C EXISTING TAP LOCATION TO BE DUG UP AND CAPPED/PLUGGED
- xxx - E EXISTING LATERAL CONNECTION - NO WORK NEEDED
- xxx - R DIG UP AND RECONNECT EXISTING PVC LATERAL TO CIPP LINED MAIN

NOTE: SOURCE OF 2015 AERIAL IMAGERY IS FROM MADISON COUNTY GIS.



SCALE: 1" = 50'



GRW PROJECT NO. 4447-24  
SRF NO. WW16074803



**SANITARY SEWER  
REHABILITATION PLAN**  
SEWER REHABILITATION PROJECT PHASE II  
TOWN OF PENDLETON, INDIANA

DESIGNED	GWL	DRAWN	GCR	REVIEWED	GWL	APPROVED	JPT
DATE							
DESCRIPTION							
DATE							
DESCRIPTION							
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DESCRIPTION							

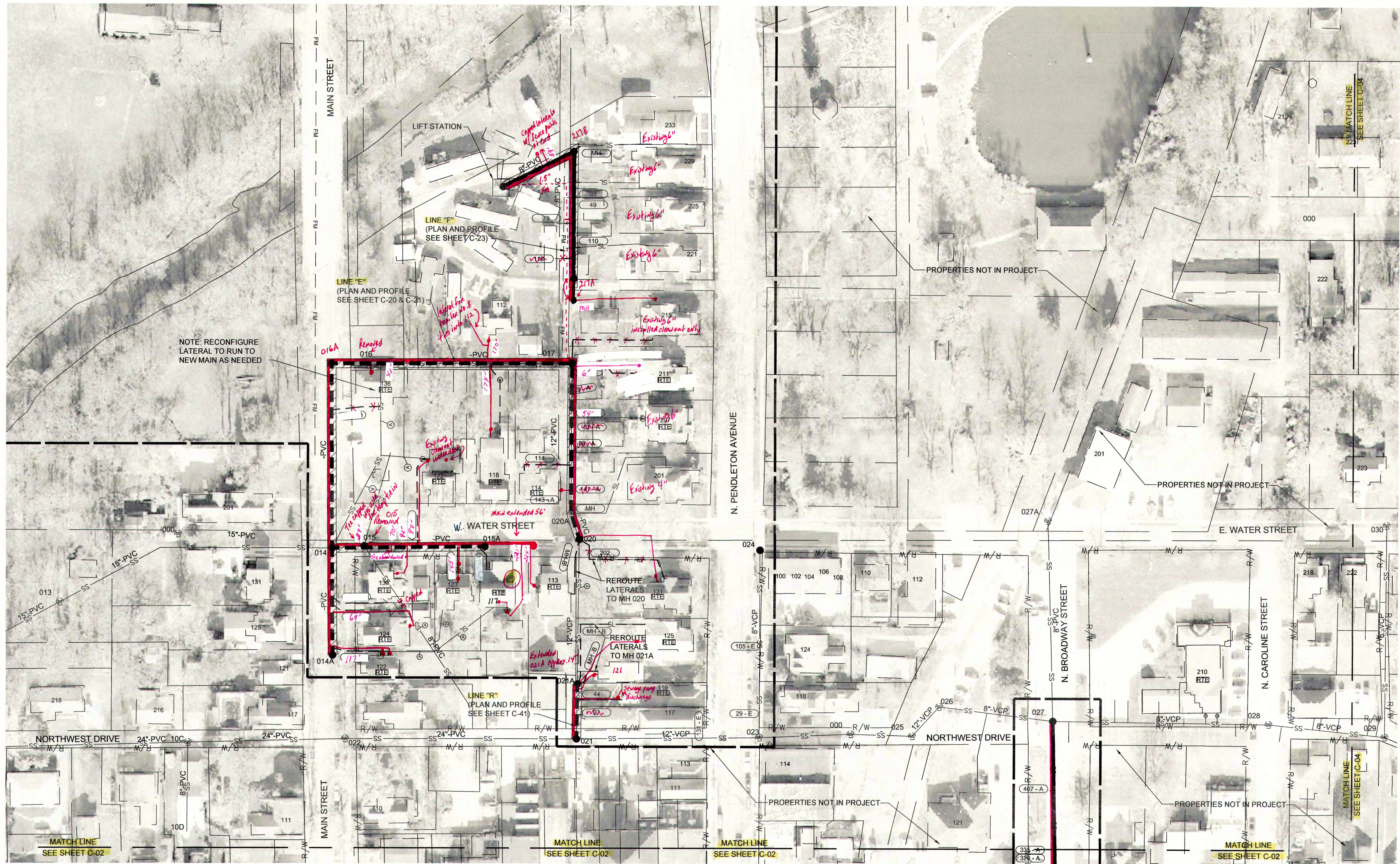
DATE: MARCH 2017

SCALE: 1"=50'

SHEET NO.

**C-02**





- NOTES:**
- ALL LATERALS AND TAP LOCATIONS ARE BASED ON BEST INFORMATION AVAILABLE. CONTRACTOR SHALL FIELD VERIFY LOCATIONS OF LATERAL CONNECTIONS AND WHETHER LATERAL PIPES ARE ACTIVE OR ABANDONED BEFORE RECONNECTING OR ABANDONING THE CONNECTIONS.
  - UTILITY LOCATIONS ARE NOT SHOWN FOR LATERAL REPLACEMENT WORK. CONTRACTOR IS RESPONSIBLE FOR FIELD LOCATING ALL UTILITIES AND ADJUSTING PROPOSED LATERAL ROUTES AS NEEDED TO AVOID CONFLICTS.
  - FOR LATERAL REPLACEMENTS, CONTRACTOR SHALL FIRST VERIFY LOCATION OF EXISTING LATERALS & UTILITIES. THEN MEET WITH DISTRICT, ENGINEER AND PROPERTY OWNER TO DETERMINE ACTUAL ROUTE OF NEW LATERAL TO BE INSTALLED.
  - LATERAL REPLACEMENTS CONNECTING TO MAINS TO BE CIPP LINED MUST BE COMPLETED AFTER CIPP LINER IS IN PLACE SO THAT SADDLE CAN CONNECT DIRECTLY TO CIPP.

LEGEND	
SS-XX	EXISTING SANITARY SEWER MAIN
SS-#	EXISTING SANITARY SEWER MANHOLE
SS-#	MANHOLE NUMBER
SS-#	SANITARY SEWER MAIN TO BE CIPP LINED
SS-#	SANITARY SEWER MAIN TO DIG AND REPLACED (SEE PLAN & PROFILE SHEETS)
SS-#	SANITARY MANHOLE TO BE REPLACED OR REHABILITATED (SEE SCHEDULE ON SHEET C-43)
SS-#	RIGHT TO ENTER DOCUMENT SIGNED BY PROPERTY OWNER
P	PLUMBING IN HOME TO BE RE-ROUTED BY DISTRICT
A	EXISTING PIPE SEGMENT TO BE ABANDONED
SL	EXISTING SANITARY SEWER LATERAL
CO	EXISTING SANITARY SEWER CLEANOUT
UNK	SANITARY LATERAL REPLACEMENT
MH	DISTANCE UNKNOWN
MH	EXISTING LATERAL TO BE CONNECTED TO EXISTING MANHOLE

xxx	EXISTING TAP LOCATION TO BE RECONNECTED - DISTANCE FROM MANHOLE
xxx-A	EXISTING TAP LOCATION TO BE ABANDONED
xxx-B	NEW TAP LOCATION TO BE ESTABLISHED
xxx-C	EXISTING TAP LOCATION TO BE DUG UP AND CAPPED/PLUGGED
xxx-E	EXISTING LATERAL CONNECTION - NO WORK NEEDED
xxx-R	DIG UP AND RECONNECT EXISTING PVC LATERAL TO CIPP LINED MAIN

NOTE: SOURCE OF 2015 AERIAL IMAGERY IS FROM MADISON COUNTY GIS.

DATE: MARCH 2017

SCALE: 1"=50'

SCALE: 1" = 50'

JOSEPH P. TIENY  
REGISTERED  
No. 19300407  
STATE OF INDIANA  
PROFESSIONAL ENGINEER

GRW PROJECT NO. 4447-24  
SRF NO. WM6074803

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**SANITARY SEWER  
REHABILITATION PLAN**

SEWER REHABILITATION PROJECT PHASE II  
TOWN OF PENDLETON, INDIANA

REVISIONS	DATE	BY	DESCRIPTION

DATE: MARCH 2017

SCALE: 1"=50'

SHEET NO. C-03





NOTES:

- ALL LATERALS AND TAP LOCATIONS ARE BASED ON BEST INFORMATION AVAILABLE. CONTRACTOR SHALL FIELD VERIFY LOCATIONS OF LATERAL CONNECTIONS AND WHETHER LATERAL PIPES ARE ACTIVE OR ABANDONED BEFORE RECONNECTING OR ABANDONING THE CONNECTIONS.
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- LATERAL REPLACEMENTS CONNECTING TO MAINS TO BE CIPP LINED MUST BE COMPLETED AFTER CIPP LINER IS IN PLACE SO THAT SADDLE CAN CONNECT DIRECTLY TO CIPP.

LEGEND

- SS XX\* EXISTING SANITARY SEWER MAIN
- SS # EXISTING SANITARY SEWER MANHOLE
- SANITARY SEWER MAIN TO BE CIPP LINED
- SANITARY SEWER MAIN TO BE REPLACED (SEE PLAN & PROFILE SHEETS)
- SANITARY MANHOLE TO BE REPLACED OR REHABILITATED (SEE SCHEDULE ON SHEET C-43)
- RTB RIGHT TO ENTER DOCUMENT SIGNED BY PROPERTY OWNER

- P PLUMBING IN HOME TO BE RE-ROUTED BY DISTRICT
- A EXISTING PIPE SEGMENT TO BE ABANDONED
- SL EXISTING SANITARY SEWER LATERAL
- CO EXISTING SANITARY SEWER CLEANOUT
- UNK SANITARY LATERAL REPLACEMENT
- UNK DISTANCE UNKNOWN
- MH EXISTING LATERAL TO BE CONNECTED TO EXISTING MANHOLE

- xxx EXISTING TAP LOCATION TO BE RECONNECTED - DISTANCE FROM MANHOLE
- xxx - A EXISTING TAP LOCATION TO BE ABANDONED
- xxx - B NEW TAP LOCATION TO BE ESTABLISHED
- xxx - C EXISTING TAP LOCATION TO BE DUG UP AND CAPPED/PLUGGED
- xxx - E EXISTING LATERAL CONNECTION - NO WORK NEEDED
- xxx - R DIG UP AND RECONNECT EXISTING PVC LATERAL TO CIPP LINED MAIN

NOTE:  
SOURCE OF 2015 AERIAL IMAGERY  
IS FROM MADISON COUNTY GIS.

DATE: MARCH 2017  
SCALE: 1"=50'  
SHEET NO: C-04

0' 50' 100'

SCALE: 1" = 50'

JOSEPH P. TIERNEY  
REGISTERED  
No. 19300407  
STATE OF INDIANA  
PROFESSIONAL ENGINEER

GRW PROJECT NO. 4447-24  
SRF NO. WW16074803

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SANITARY SEWER  
REHABILITATION PLAN  
SEWER REHABILITATION PROJECT PHASE II  
TOWN OF PENDLETON, INDIANA

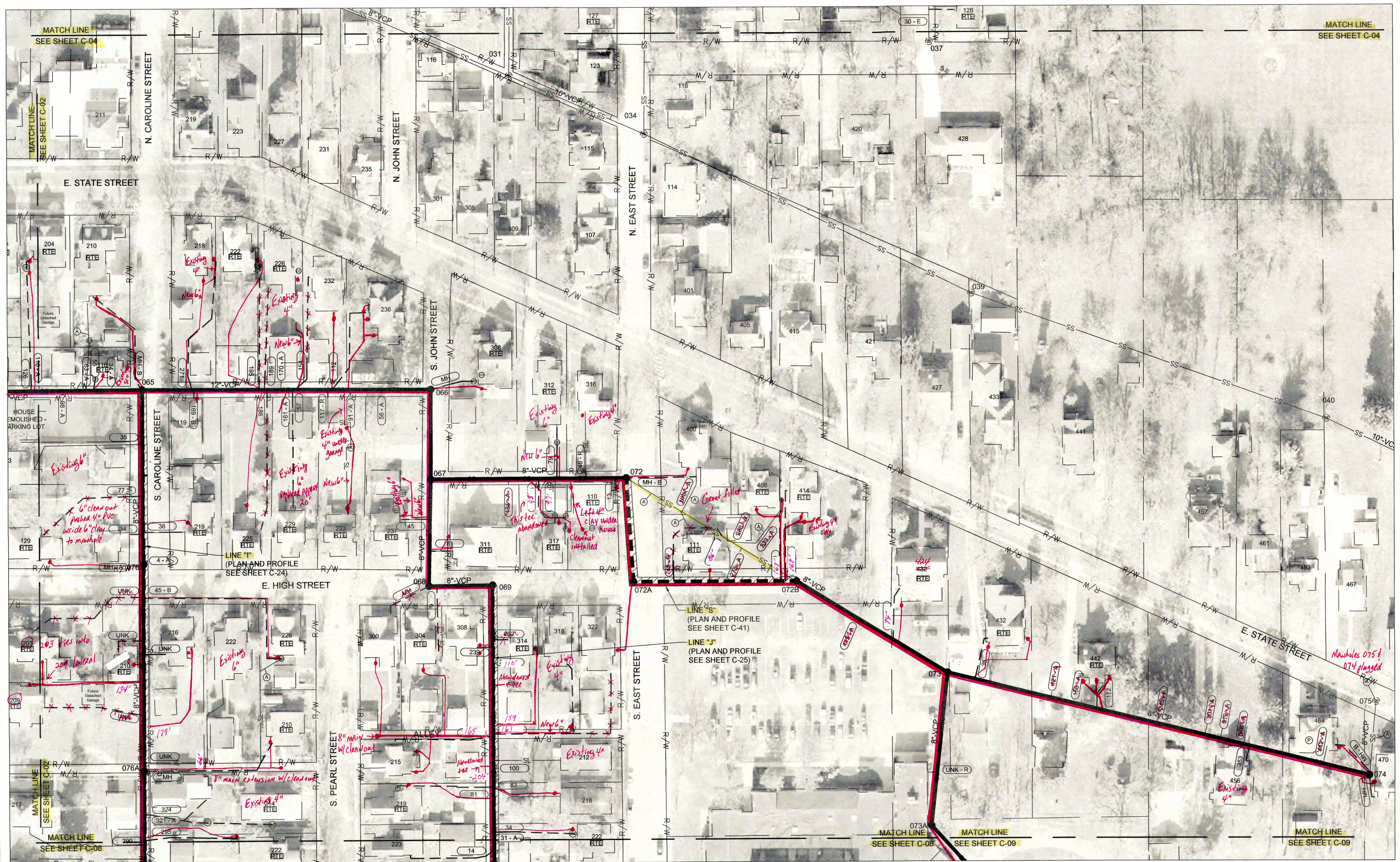
DESIGNED	GWL	BY	DATE	DESCRIPTION
DRAWN	GCR	BY	DATE	DESCRIPTION
REVIEWED	GWL	BY	DATE	DESCRIPTION
APPROVED	JPT	BY	DATE	DESCRIPTION

THIS MARK SHOULD MEASURE EXACTLY WHEN PLOTTED



PRINTED: 3/11/2017 @ 2:17PM

FILE NAME: G:\4447 FORWD-2015\Working Drawings\AutoCAD\REHABILITATION PHASE I\4447-24-C-05.dwg



NOTES:

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LEGEND

- SS XX" EXISTING SANITARY SEWER MAIN
- SS # EXISTING SANITARY SEWER MANHOLE
- MANHOLE NUMBER → #
- SANITARY SEWER MAIN TO BE CIPP LINED
- SANITARY SEWER MAIN TO BE DIG AND REPLACED (SEE PLAN & PROFILE SHEETS)
- SANITARY MANHOLE TO BE REPLACED OR REHABILITATED (SEE SCHEDULE ON SHEET C-43)
- RTE RIGHT TO ENTER DOCUMENT SIGNED BY PROPERTY OWNER

- (P) PLUMBING IN HOME TO BE RE-ROUTED BY DISTRICT
- (A) EXISTING PIPE SEGMENT TO BE ABANDONED
- SL — EXISTING SANITARY SEWER LATERAL
- (CO) EXISTING SANITARY SEWER CLEANOUT
- SANITARY LATERAL REPLACEMENT
- UNK — DISTANCE UNKNOWN
- (MH) EXISTING LATERAL TO BE CONNECTED TO EXISTING MANHOLE

- xxx EXISTING TAP LOCATION TO BE RECONNECTED - DISTANCE FROM MANHOLE
- xxx - A EXISTING TAP LOCATION TO BE ABANDONED
- xxx - B NEW TAP LOCATION TO BE ESTABLISHED
- xxx - C EXISTING TAP LOCATION TO BE DUG UP AND CAPPED/PLUGGED
- xxx - E EXISTING LATERAL CONNECTION - NO WORK NEEDED
- xxx - R DIG UP AND RECONNECT EXISTING PVC LATERAL TO CIPP LINED MAIN

NOTE:  
SOURCE OF 2015 AERIAL IMAGERY  
IS FROM MADISON COUNTY GIS.

DATE: MARCH 2017

SCALE: 1"=50'

SHEET NO. C-05

0' 50' 100'

SCALE: 1" = 50'

JOSEPH P. TIERNEY  
REGISTERED  
No. 19300407  
STATE OF INDIANA  
PROFESSIONAL ENGINEER

GRW PROJECT NO. 4447-24

SRF NO. WW6074803

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SANITARY SEWER  
REHABILITATION PLAN  
SEWER REHABILITATION PROJECT PHASE II  
TOWN OF PENDLETON, INDIANA

DESIGNED	GWL	BY	DATE

DRAWN	GCR	BY	DATE

REVIEWED	GWL	BY	DATE

APPROVED	JPT	BY	DATE







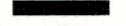
THIS MARK SHOULD MEASURE EXACTLY 1" WHEN PLOTTED

SCALE CHECK 1






1. ALL LATERALS AND TAP LOCATIONS ARE BASED ON BEST INFORMATION AVAILABLE. CONTRACTOR SHALL FIELD VERIFY LOCATIONS OF LATERAL CONNECTIONS AND WHETHER LATERAL PIPES ARE ACTIVE OR ABANDONED BEFORE RECONNECTING OR ABANDONING THE CONNECTIONS.
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	PLUMBING IN HOME TO BE RE-ROUTED BY DISTRICT
	EXISTING PIPE SEGMENT TO BE ABANDONED
	EXISTING SANITARY SEWER LATERAL
	EXISTING SANITARY SEWER CLEANOUT
	SANITARY LATERAL REPLACEMENT
	DISTANCE UNKNOWN
	EXISTING LATERAL TO BE CONNECTED TO EXISTING MANHOLE

**NOTE:**  
SOURCE OF 2015 AERIAL IMAGERY  
IS FROM MADISON COUNTY GIS.

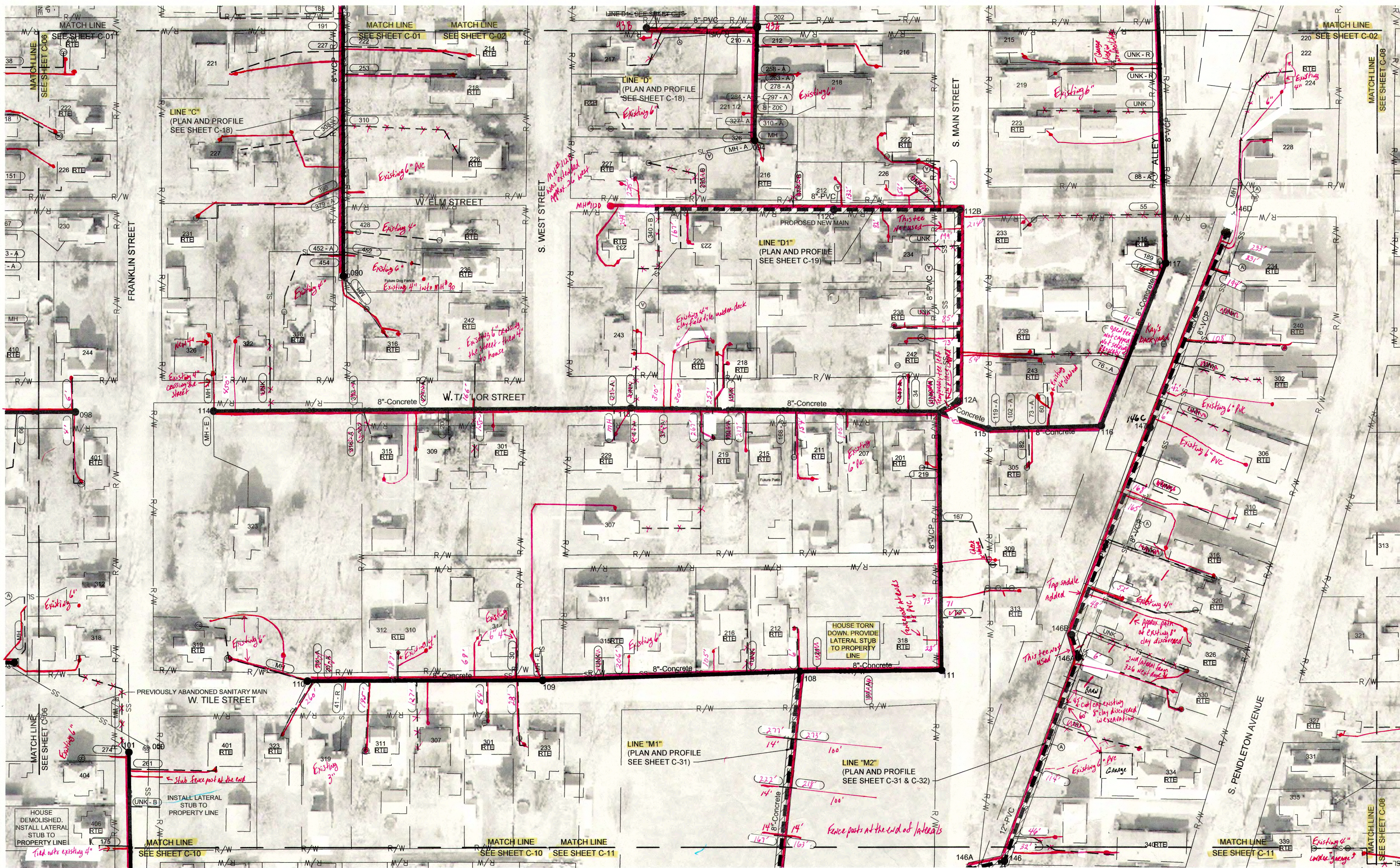


0' 50' 100'

SCALE: 1" = 50'

<div>SEWER REHABILITATION PROJECT PHASE II</div> <div>TOWN OF PENDLETON, INDIANA</div>		<div>GRW PROJECT NO. 4447-24</div> <div>SRF NO. W0018074803</div> <div>ALL INFORMATION CONTAINED HEREIN IS THE PROPERTY OF GRW INC. AND IS NOT TO BE REPRODUCED IN WHOLE OR IN PART WITHOUT THE WRITTEN PERMISSION OF GRW INC.</div>		<div></div> <div>engineering   architecture   geospatial</div> <div>www.grwinc.com</div>		<div>JOSEPH P. TIERNEY REGISTERED No. 19300407 STATE OF INDIANA PROFESSIONAL ENGINEER</div> <div></div>	
<div>SANITARY SEWER REHABILITATION PLAN</div>		<div>DESIGNED: GWL</div>		<div>DATE: 03/01/2017</div>		<div>BY: [Signature]</div>	
<div>SEWER REHABILITATION PROJECT PHASE II</div>		<div>DRAWN: GCR</div>		<div>DATE: 03/01/2017</div>		<div>BY: [Signature]</div>	
<div>TOWN OF PENDLETON, INDIANA</div>		<div>REVIEWED: GWL</div>		<div>DATE: 03/01/2017</div>		<div>BY: [Signature]</div>	
<div>REVISIONS</div>		<div>APPROVED: JPT</div>		<div>DATE: 03/01/2017</div>		<div>BY: [Signature]</div>	
<div>NO. DESCRIPTION</div>		<div>SCALE CHECK: 1"=50'</div>		<div>THIS MARK SHOULD MEASURE EXACTLY 1" WHEN PLOTTED</div>		<div>DATE: MARCH 2017</div>	
<div>1"=50'</div>		<div>SHEET NO. C-06</div>		<div>SCALE: 1"=50'</div>		<div>DATE: MARCH 2017</div>	





NOTES:

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SS XX"	EXISTING SANITARY SEWER MAIN
SS #	EXISTING SANITARY SEWER MANHOLE
---	SANITARY SEWER MAIN TO BE CIPP LINED
---	SANITARY SEWER MAIN TO BE DIG AND REPLACED (SEE PLAN & PROFILE SHEETS)
●	SANITARY MANHOLE TO BE REPLACED OR REHABILITATED (SEE SCHEDULE ON SHEET C-43)
RTE	RIGHT TO ENTER DOCUMENT SIGNED BY PROPERTY OWNER

(P)	PLUMBING IN HOME TO BE RE-ROUTED BY DISTRICT
(A)	EXISTING PIPE SEGMENT TO BE ABANDONED
SL	EXISTING SANITARY SEWER LATERAL
(CO)	EXISTING SANITARY SEWER CLEANOUT
---	SANITARY LATERAL REPLACEMENT
---	DISTANCE UNKNOWN
UNK	EXISTING LATERAL TO BE CONNECTED TO EXISTING MANHOLE
MH	EXISTING LATERAL TO BE CONNECTED TO EXISTING MANHOLE

xxx	EXISTING TAP LOCATION TO BE RECONNECTED - DISTANCE FROM MANHOLE
xxx - A	EXISTING TAP LOCATION TO BE ABANDONED
xxx - B	NEW TAP LOCATION TO BE ESTABLISHED
xxx - C	EXISTING TAP LOCATION TO BE DUG UP AND CAPPED/PLUGGED
xxx - E	EXISTING LATERAL CONNECTION - NO WORK NEEDED
xxx - R	DIG UP AND RECONNECT EXISTING PVC LATERAL TO CIPP LINED MAIN

NOTE: SOURCE OF 2015 AERIAL IMAGERY IS FROM MADISON COUNTY GIS.

REVISIONS

NO.	DATE	BY	DESCRIPTION

SCALE: 1"=50'

SCALE CHECK: THIS MARK SHOULD MEASURE EXACTLY 1" WHEN PLOTTED

JOSEPH P. TIERIE  
REGISTERED  
No. 19300407  
STATE OF INDIANA  
PROFESSIONAL ENGINEER

GRW PROJECT NO. 4447-24  
SRF NO. WW6074803

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**SANITARY SEWER  
REHABILITATION PLAN**

**SEWER REHABILITATION PROJECT PHASE II**

**TOWN OF PENDLETON, INDIANA**

DESIGNED	GWL	DATE	BY	DESCRIPTION

DRAWN	GCR	DATE	BY	DESCRIPTION

REVIEWED	GWL	DATE	BY	DESCRIPTION

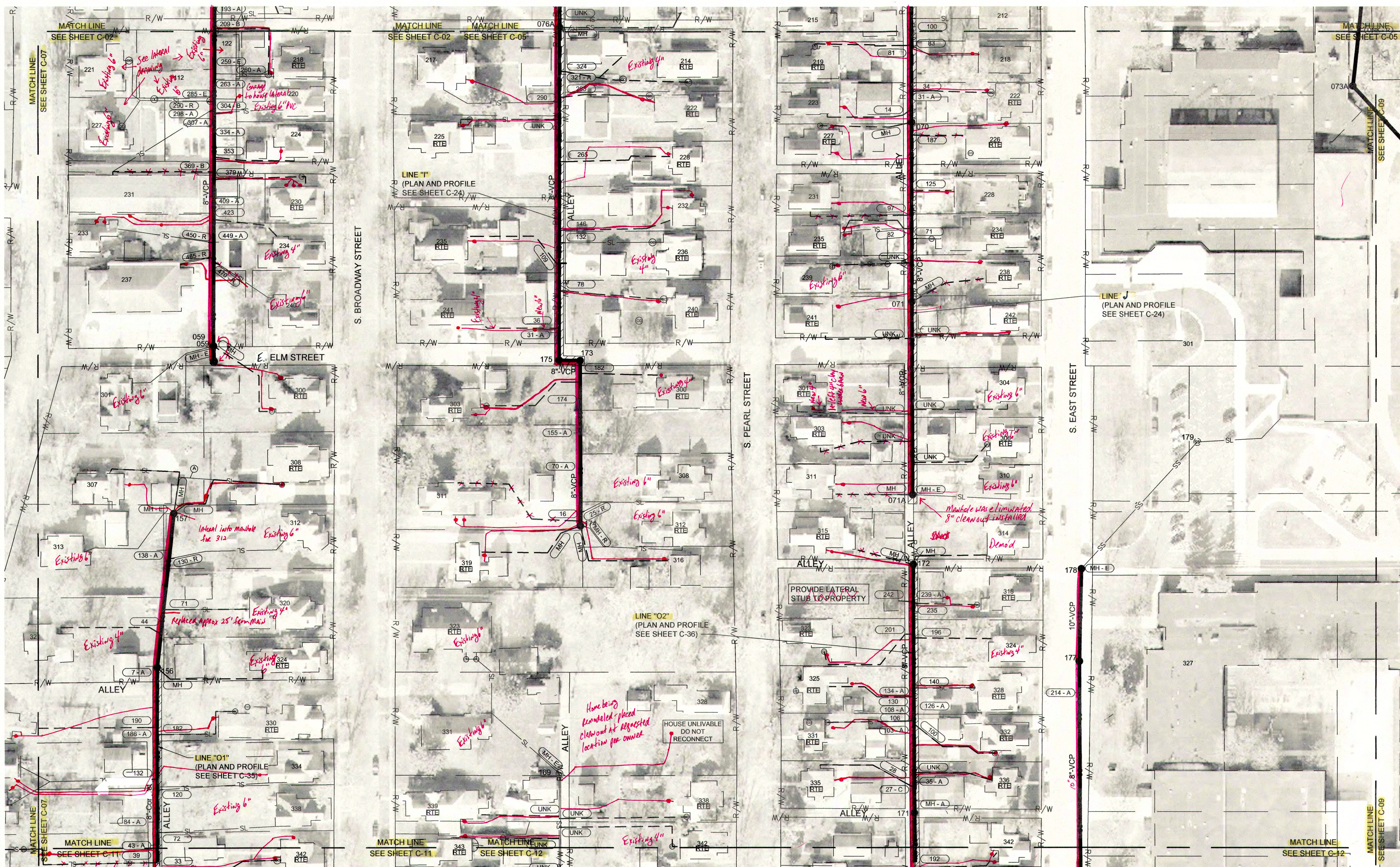
APPROVED	JPT	DATE	BY	DESCRIPTION

DATE: MARCH 2017

SCALE: 1"=50'

SHEET NO. **C-07**





NOTES:

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- SS # EXISTING SANITARY SEWER MANHOLE
- MANHOLE NUMBER → #
- SANITARY SEWER MAIN TO BE CIPP LINED
- SANITARY SEWER MAIN TO BE DIG AND REPLACED (SEE PLAN & PROFILE SHEETS)
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- SL — EXISTING SANITARY SEWER LATERAL
- (CO) EXISTING SANITARY SEWER CLEANOUT
- — SANITARY LATERAL REPLACEMENT
- — DISTANCE UNKNOWN
- (UNK) EXISTING LATERAL TO BE CONNECTED TO EXISTING MANHOLE
- (MH)

- (xxx) EXISTING TAP LOCATION TO BE RECONNECTED - DISTANCE FROM MANHOLE
- (xxx - A) EXISTING TAP LOCATION TO BE ABANDONED
- (xxx - B) NEW TAP LOCATION TO BE ESTABLISHED
- (xxx - C) EXISTING TAP LOCATION TO BE DUG UP AND CAPPED/PLUGGED
- (xxx - E) EXISTING LATERAL CONNECTION - NO WORK NEEDED
- (xxx - R) DIG UP AND RECONNECT EXISTING PVC LATERAL TO CIPP LINED MAIN

NOTE: SOURCE OF 2015 AERIAL IMAGERY IS FROM MADISON COUNTY GIS.

DATE: MARCH 2017

SCALE: 1"=50'

SHEET NO. C-08

SCALE CHECK: THIS MARK SHOULD MEASURE EXACTLY 1" WHEN PLOTTED

0' 50' 100'

SCALE: 1" = 50'

JOSEPH P. TIERNEY  
REGISTERED  
No. 19300407  
STATE OF INDIANA  
PROFESSIONAL ENGINEER

GRW PROJECT NO. 4447-24  
SRF NO. WW18074803

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SANITARY SEWER  
REHABILITATION PLAN  
SEWER REHABILITATION PROJECT PHASE II  
TOWN OF PENDELTON, INDIANA

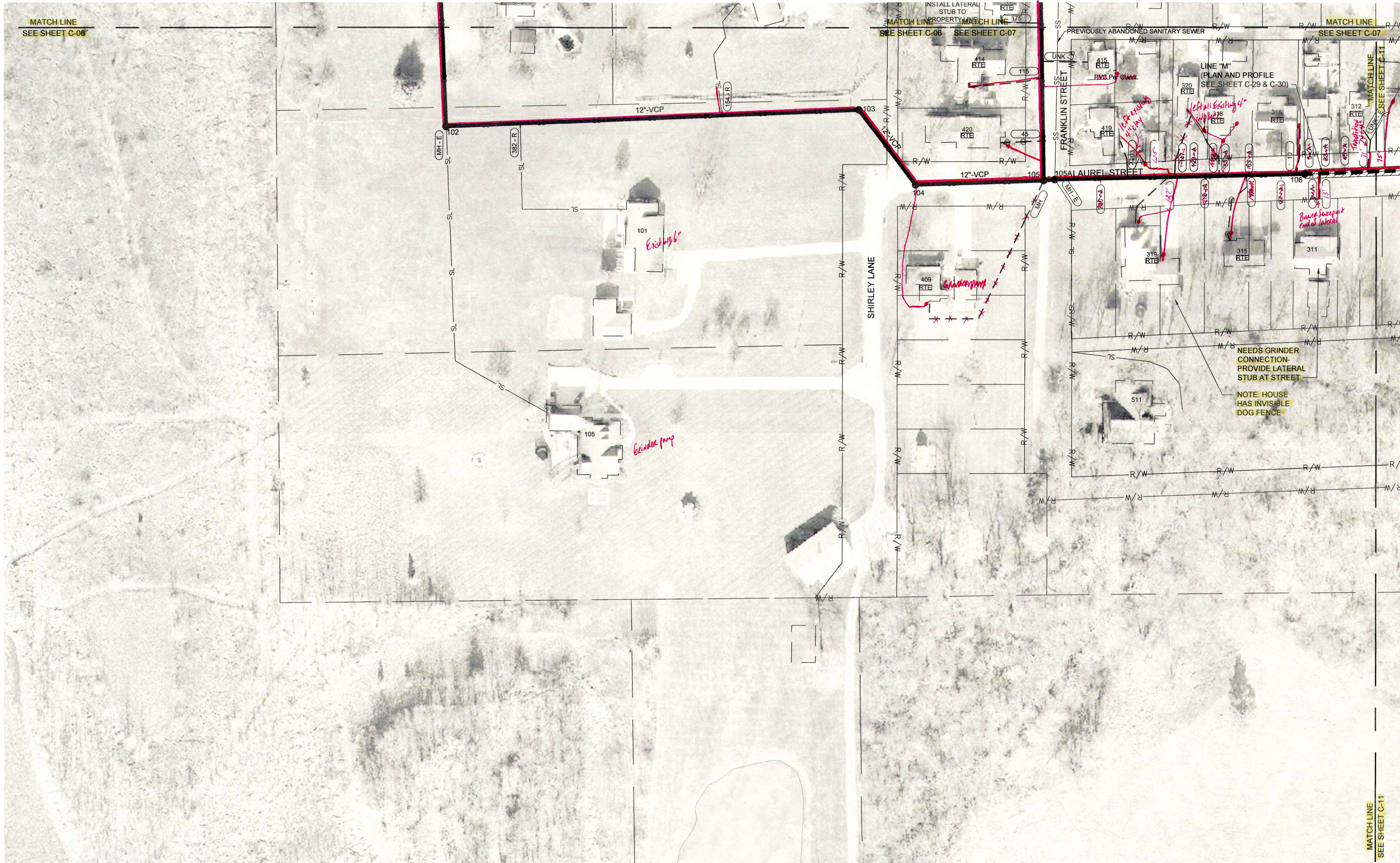
REVISIONS	DATE	DESCRIPTION	BY	DATE	DESCRIPTION	BY

DESIGNED: GWL  
DRAWN: GCR  
REVIEWED: GWL  
APPROVED: JPT









NOTES:

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SS #	EXISTING SANITARY SEWER MANHOLE
MANHOLE NUMBER → #	
SS	SANITARY SEWER MAIN TO BE CIPP LINED
SS	SANITARY SEWER MAIN TO BE DIG AND REPLACED (SEE PLAN & PROFILE SHEETS)
SS	SANITARY MANHOLE TO BE REPLACED OR REHABILITATED (SEE SCHEDULE ON SHEET C-43)
RT	RIGHT TO ENTER DOCUMENT SIGNED BY PROPERTY OWNER

P	PLUMBING IN HOME TO BE RE-ROUTED BY DISTRICT
A	EXISTING PIPE SEGMENT TO BE ABANDONED
SL	EXISTING SANITARY SEWER LATERAL
CO	EXISTING SANITARY SEWER CLEANOUT
UNK	SANITARY LATERAL REPLACEMENT
UNK	DISTANCE UNKNOWN
MH	EXISTING LATERAL TO BE CONNECTED TO EXISTING MANHOLE

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xxx - R	DIG UP AND RECONNECT EXISTING PVC LATERAL TO CIPP LINED MAIN

NOTE: SOURCE OF 2015 AERIAL IMAGERY IS FROM MADISON COUNTY GIS.

DATE: MARCH 2017

SCALE: 1"=50'

SHEET NO. C-10

SCALE: 1" = 50'

JOSEPH P. TIERNEY  
REGISTERED  
No. 19300407  
STATE OF INDIANA  
PROFESSIONAL ENGINEER

GRW PROJECT NO. 4447-24

SRF NO. WW0074803

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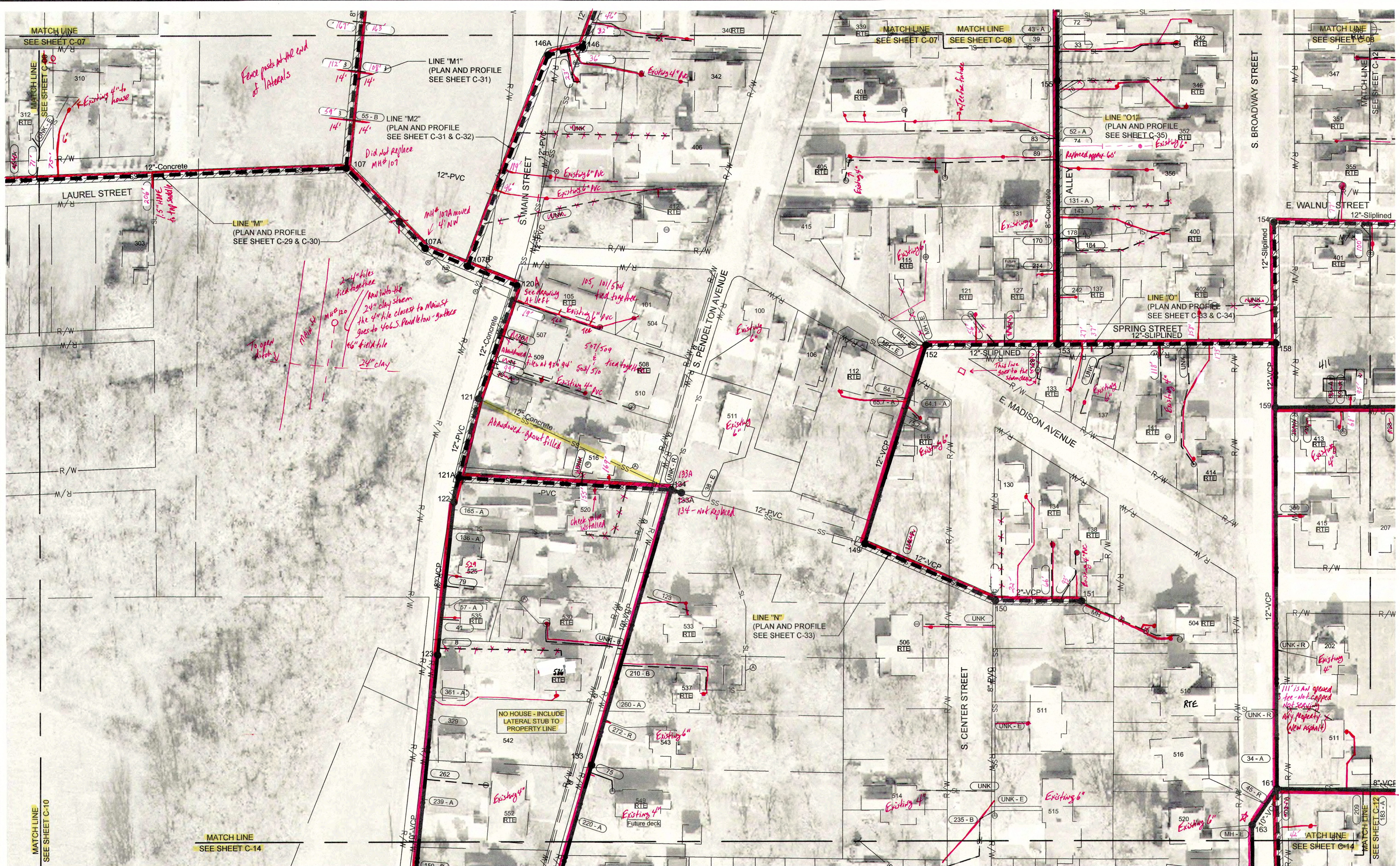
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SANITARY SEWER  
REHABILITATION PLAN  
SEWER REHABILITATION PROJECT PHASE II  
TOWN OF PENDLETON, INDIANA

DESIGNED	GWL
DRAWN	GCR
REVIEWED	GWL
APPROVED	JPT

DATE: MARCH 2017  
SCALE: 1"=50'  
SHEET NO. C-10





#### NOTES:

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SS XX"	EXISTING SANITARY SEWER MAIN
SS #	EXISTING SANITARY SEWER MANHOLE
SS	SANITARY SEWER MAIN TO BE CIPP LINED
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xxx-E	EXISTING LATERAL CONNECTION - NO WORK NEEDED
xxx-R	DIG UP AND RECONNECT EXISTING PVC LATERAL TO CIPP LINED MAIN

NOTE: SOURCE OF 2015 AERIAL IMAGERY IS FROM HANCOCK COUNTY GIS.	
★	Side view of MH #163 to MH #161
2'-45"	
SCALE: 1" = 50'	

JOSEPH P. TIERNEY  
REGISTERED  
No. 19300407  
STATE OF INDIANA  
PROFESSIONAL ENGINEER

GRW PROJECT NO. 4447-24

SRF NO. WW6074803

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### SANITARY SEWER REHABILITATION PLAN

#### SEWER REHABILITATION PROJECT PHASE II

#### TOWN OF PENDLETON, INDIANA

REVISIONS	DATE	BY	DESCRIPTION

DESIGNED: GWL

DRAWN: GOR

REVIEWED: GWL

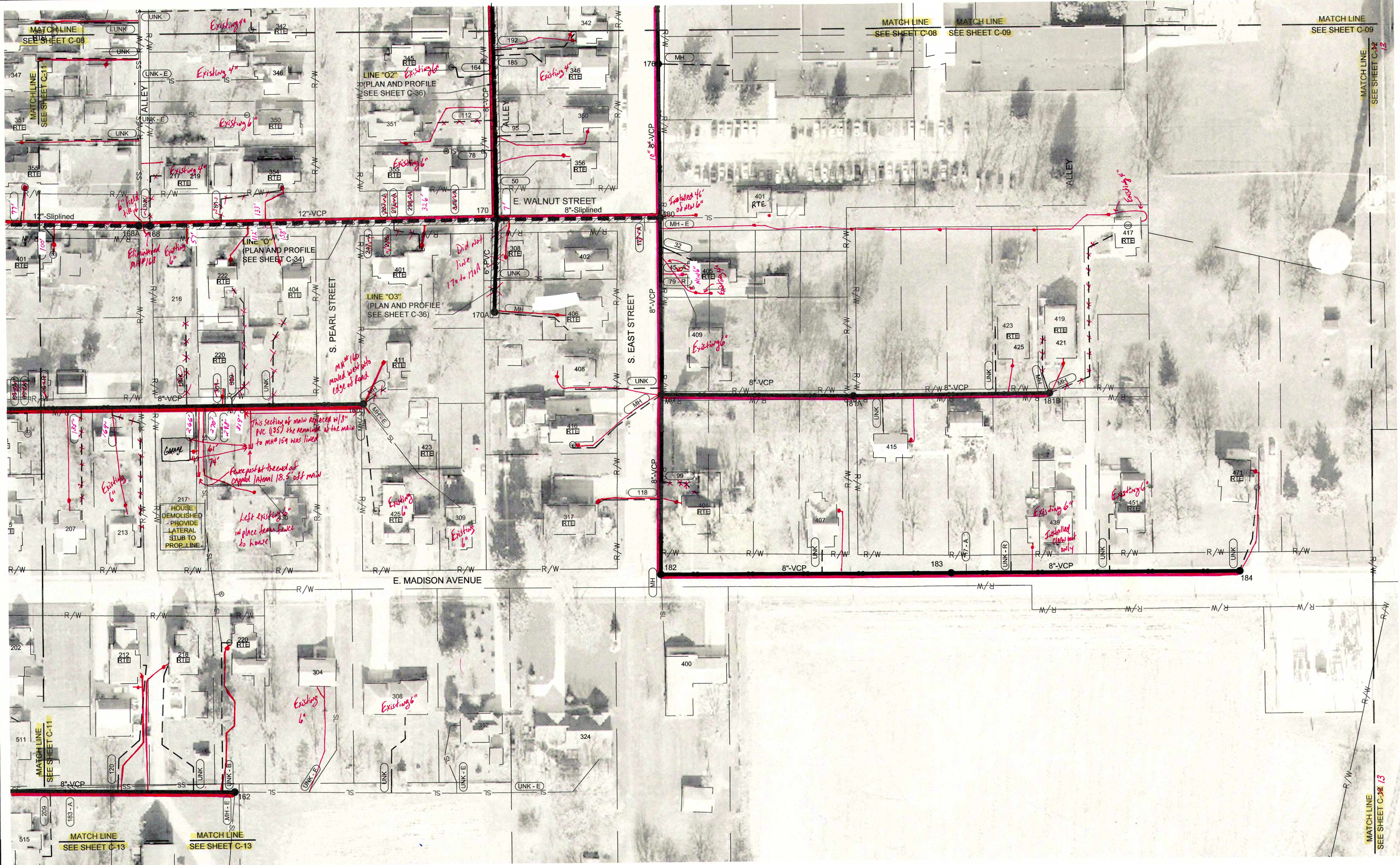
APPROVED: JPT

DATE: MARCH 2017

SCALE: 1"=50'

SHEET NO. C-11





NOTES:

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- SS # — EXISTING SANITARY SEWER MANHOLE
- SANITARY SEWER MAIN TO BE CIPP LINED
- SANITARY SEWER MAIN TO DIG AND REPLACED (SEE PLAN & PROFILE SHEETS)
- SANITARY MANHOLE TO BE REPLACED OR REHABILITATED (SEE SCHEDULE ON SHEET C-43)
- RTE — RIGHT TO ENTER DOCUMENT SIGNED BY PROPERTY OWNER

- (P) PLUMBING IN HOME TO BE RE-ROUTED BY DISTRICT
- (A) EXISTING PIPE SEGMENT TO BE ABANDONED
- SL — EXISTING SANITARY SEWER LATERAL
- (CO) EXISTING SANITARY SEWER CLEANOUT
- SANITARY LATERAL REPLACEMENT
- (UNK) DISTANCE UNKNOWN
- (MH) EXISTING LATERAL TO BE CONNECTED TO EXISTING MANHOLE

- (xxx) EXISTING TAP LOCATION TO BE RECONNECTED - DISTANCE FROM MANHOLE
- (xxx - A) EXISTING TAP LOCATION TO BE ABANDONED
- (xxx - B) NEW TAP LOCATION TO BE ESTABLISHED
- (xxx - C) EXISTING TAP LOCATION TO BE DUG UP AND CAPPED/PLUGGED
- (xxx - E) EXISTING LATERAL CONNECTION - NO WORK NEEDED
- (xxx - R) DIG UP AND RECONNECT EXISTING PVC LATERAL TO CIPP LINED MAIN

NOTE: SOURCE OF 2015 AERIAL IMAGERY IS FROM MADISON COUNTY GIS.



0' 50' 100'

SCALE: 1" = 50'

JOSEPH P. TIERNY  
REGISTERED  
No. 19300407  
STATE OF INDIANA  
PROFESSIONAL ENGINEER

GRWPROJECT NO. 4447-24  
SRF NO. WW16074803

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**SANITARY SEWER  
REHABILITATION PLAN  
SEWER REHABILITATION PROJECT PHASE II  
TOWN OF PENDLETON, INDIANA**

DESIGNED	GWL	BY	DATE	REVIEWED	GCR	APPROVED	JPT

DATE: MARCH 2017

SCALE: 1"=50'

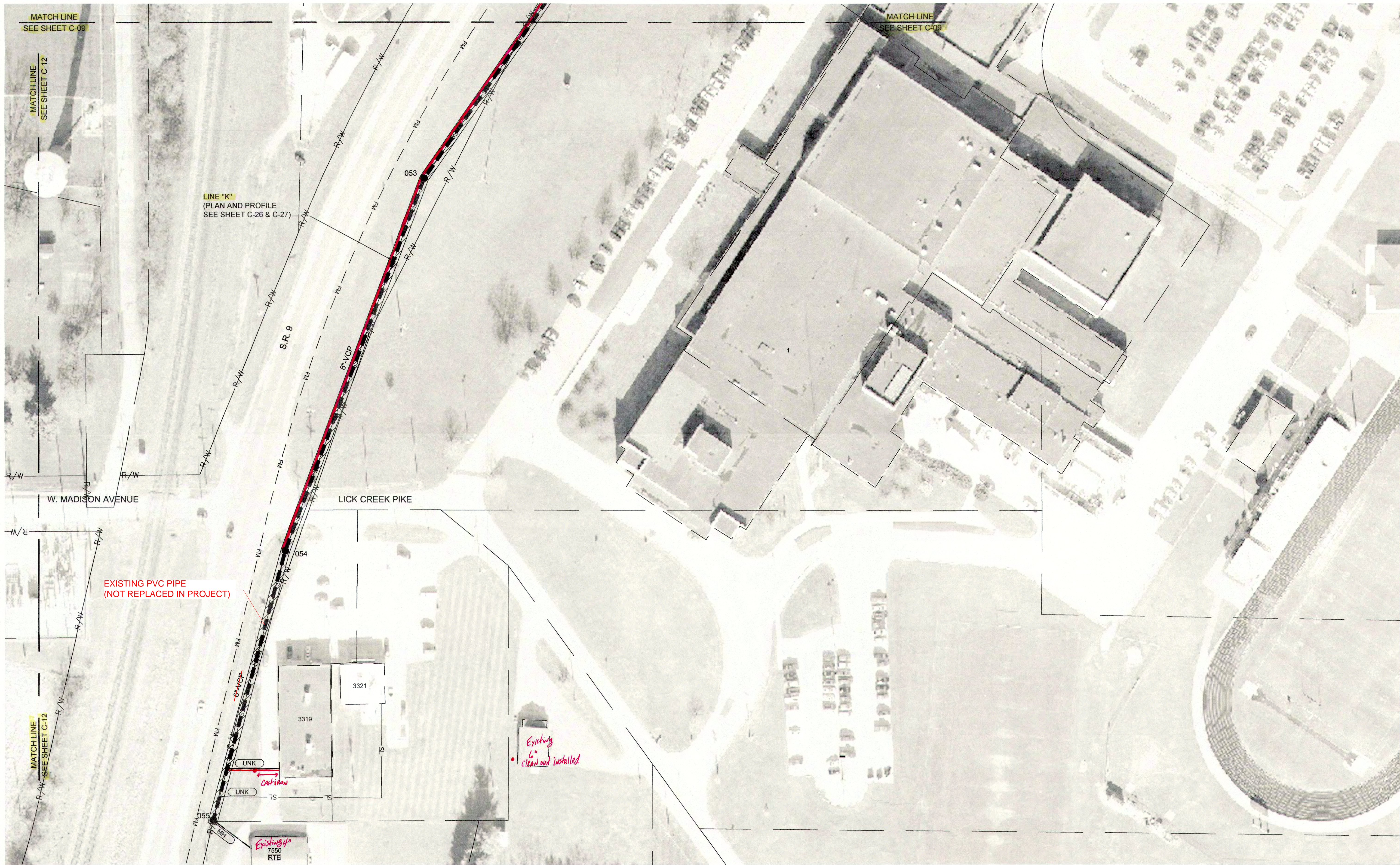
SHEET NO.

**C-12**



PRINTED: 3/11/2017 @ 2:28PM

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NOTES:

- ALL LATERALS AND TAP LOCATIONS ARE BASED ON BEST INFORMATION AVAILABLE. CONTRACTOR SHALL FIELD VERIFY LOCATIONS OF LATERAL CONNECTIONS AND WHETHER LATERAL PIPES ARE ACTIVE OR ABANDONED BEFORE RECONNECTING OR ABANDONING THE CONNECTIONS.
- UTILITY LOCATIONS ARE NOT SHOWN FOR LATERAL REPLACEMENT WORK. CONTRACTOR IS RESPONSIBLE FOR FIELD LOCATING ALL UTILITIES AND ADJUSTING PROPOSED LATERAL ROUTES AS NEEDED TO AVOID CONFLICTS.
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- LATERAL REPLACEMENTS CONNECTING TO MAINS TO BE CIPP LINED MUST BE COMPLETED AFTER CIPP LINER IS IN PLACE SO THAT SADDLE CAN CONNECT DIRECTLY TO CIPP.

- SS XX" EXISTING SANITARY SEWER MAIN
- SS # EXISTING SANITARY SEWER MANHOLE
- MANHOLE NUMBER → #
- SANITARY SEWER MAIN TO BE CIPP LINED
- SANITARY SEWER MAIN TO DIG AND REPLACED (SEE PLAN & PROFILE SHEETS)
- SANITARY MANHOLE TO BE REPLACED OR REHABILITATED (SEE SCHEDULE ON SHEET C-43)
- RTB RIGHT TO ENTER DOCUMENT SIGNED BY PROPERTY OWNER

- (P) PLUMBING IN HOME TO BE RE-ROUTED BY DISTRICT
- (A) EXISTING PIPE SEGMENT TO BE ABANDONED
- SL — EXISTING SANITARY SEWER LATERAL
- (CO) EXISTING SANITARY SEWER CLEANOUT
- SANITARY LATERAL REPLACEMENT
- UNK DISTANCE UNKNOWN
- MH EXISTING LATERAL TO BE CONNECTED TO EXISTING MANHOLE

- xxx EXISTING TAP LOCATION TO BE RECONNECTED - DISTANCE FROM MANHOLE
- xxx - A EXISTING TAP LOCATION TO BE ABANDONED
- xxx - B NEW TAP LOCATION TO BE ESTABLISHED
- xxx - C EXISTING TAP LOCATION TO BE DUG UP AND CAPPED/PLUGGED
- xxx - E EXISTING LATERAL CONNECTION - NO WORK NEEDED
- xxx - R DIG UP AND RECONNECT EXISTING PVC LATERAL TO CIPP LINED MAIN

NOTE: SOURCE OF 2015 AERIAL IMAGERY IS FROM MADISON COUNTY GIS.

DATE: MARCH 2017

SCALE: 1"=50'

SHEET NO: C-13

0' 50' 100'

SCALE: 1" = 50'

JOSEPH P. TIERNE  
REGISTERED  
No. 19300407  
STATE OF INDIANA  
PROFESSIONAL ENGINEER  
*Joseph Tierne*

GRW PROJECT NO. 4447-24  
SRF NO. WW6074803  
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SANITARY SEWER  
REHABILITATION PLAN  
SEWER REHABILITATION PROJECT PHASE II  
TOWN OF PENDLETON, INDIANA

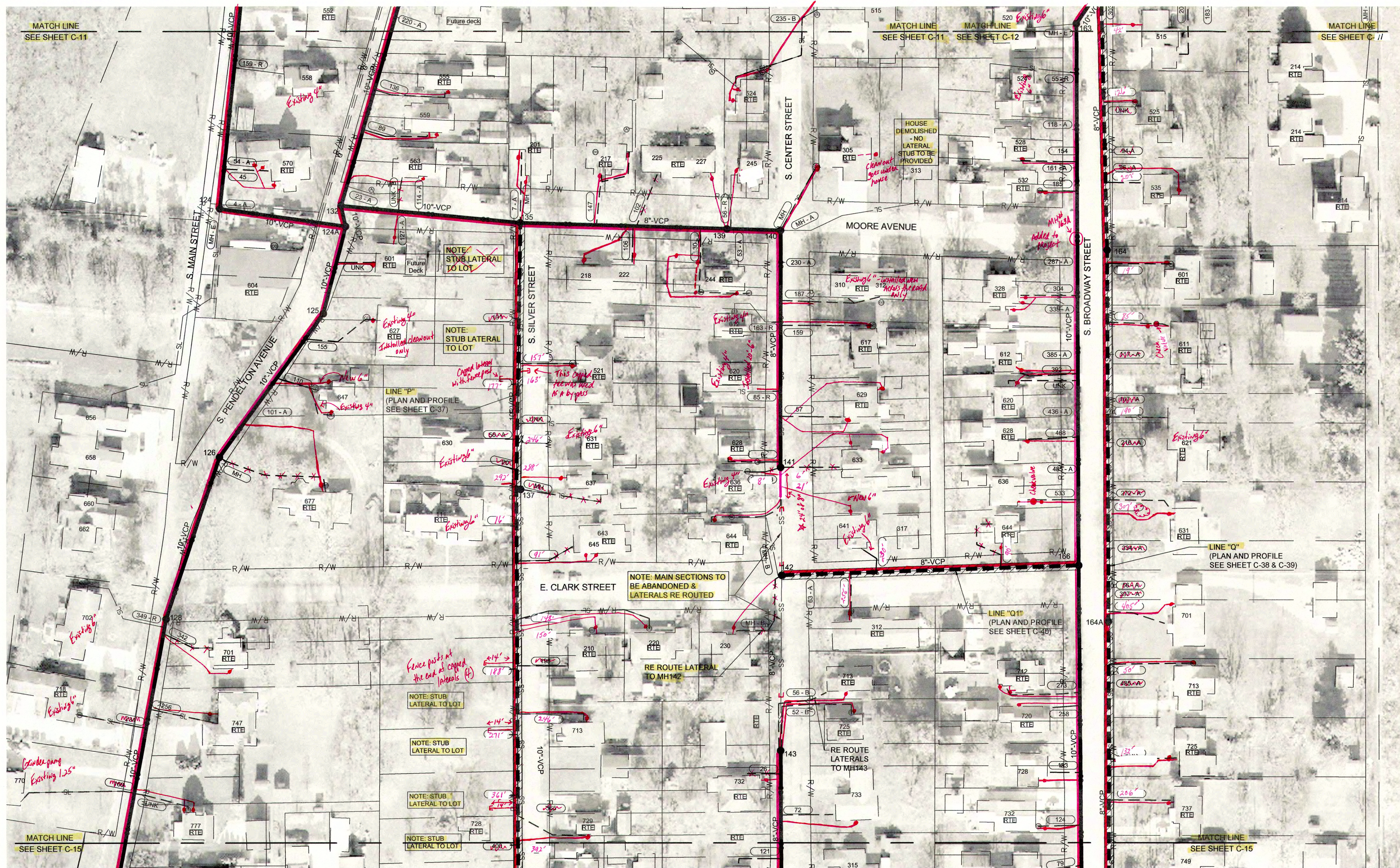
DESIGNED	GWL	BY	DATE

DRAWN	GCR	REVIEWED	APPROVED

JPT

REVISIONS  
NO. DESCRIPTION  
1. THIS MARK SHOULD MEASURE EXACTLY 1" WHEN NOTED





NOTES:

- ALL LATERALS AND TAP LOCATIONS ARE BASED ON BEST INFORMATION AVAILABLE. CONTRACTOR SHALL FIELD VERIFY LOCATIONS OF LATERAL CONNECTIONS AND WHETHER LATERAL PIPES ARE ACTIVE OR ABANDONED BEFORE RECONNECTING OR ABANDONING THE CONNECTIONS.
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SS XX"	EXISTING SANITARY SEWER MAIN
SS #	EXISTING SANITARY SEWER MANHOLE
SS	SANITARY SEWER MAIN TO BE CIPP LINED
SS	SANITARY SEWER MAIN TO BE REPLACED (SEE PLAN & PROFILE SHEETS)
SS	SANITARY MANHOLE TO BE REPLACED OR REHABILITATED (SEE SCHEDULE ON SHEET C-43)
SS	RIGHT-TO ENTER DOCUMENT SIGNED BY PROPERTY OWNER

(P)	PLUMBING IN HOME TO BE RE-ROUTED BY DISTRICT
(A)	EXISTING PIPE SEGMENT TO BE ABANDONED
SL	EXISTING SANITARY SEWER LATERAL
(CO)	EXISTING SANITARY SEWER CLEANOUT
---	SANITARY LATERAL REPLACEMENT
UNK	DISTANCE UNKNOWN
MH	EXISTING LATERAL TO BE CONNECTED TO EXISTING MANHOLE

xxx	EXISTING TAP LOCATION TO BE RECONNECTED - DISTANCE FROM MANHOLE
xxx - A	EXISTING TAP LOCATION TO BE ABANDONED
xxx - B	NEW TAP LOCATION TO BE ESTABLISHED
xxx - C	EXISTING TAP LOCATION TO BE DUG UP AND CAPPED/PLUGGED
xxx - E	EXISTING LATERAL CONNECTION - NO WORK NEEDED
xxx - R	DIG UP AND RECONNECT EXISTING PVC LATERAL TO CIPP LINED MAIN

NOTE: SOURCE OF 2015 AERIAL IMAGERY IS FROM MADISON COUNTY GIS.

DATE: MARCH 2017

SCALE: 1"=50'

SHEET NO: C-14

SCALE: 1" = 50'

JOSEPH P. TIENE  
REGISTERED  
No. 19300407  
STATE OF INDIANA  
PROFESSIONAL ENGINEER

GRW PROJECT NO. 4447-24

SRF NO. WW16074803

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SANITARY SEWER  
REHABILITATION PLAN  
SEWER REHABILITATION PROJECT PHASE II  
TOWN OF PENDLETON, INDIANA

DESIGNED	GWL	BY	DATE

DRAWN	GCR	REVIEWED	APPROVED

REVISIONS	DESCRIPTION	DATE	BY

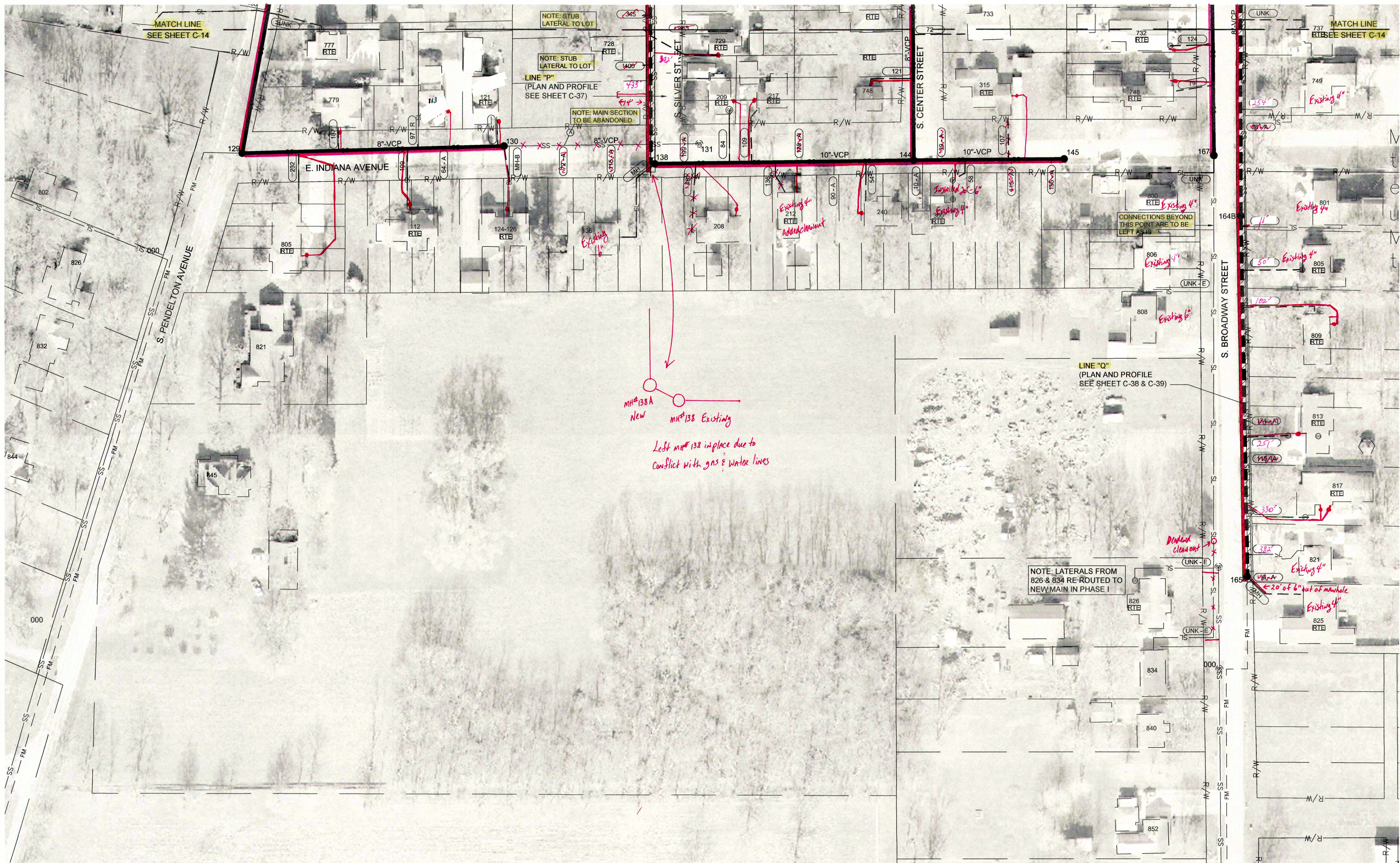
DATE: MARCH 2017

SCALE: 1"=50'

SHEET NO: C-14

SCALE: 1" = 50'





#### NOTES:

- ALL LATERALS AND TAP LOCATIONS ARE BASED ON BEST INFORMATION AVAILABLE. CONTRACTOR SHALL FIELD VERIFY LOCATIONS OF LATERAL CONNECTIONS AND WHETHER LATERAL PIPES ARE ACTIVE OR ABANDONED BEFORE RECONNECTING OR ABANDONING THE CONNECTIONS.
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SS XX"	EXISTING SANITARY SEWER MAIN
SS #	EXISTING SANITARY SEWER MANHOLE
SS	SANITARY SEWER MAIN TO BE CIPP LINED
SS	SANITARY SEWER MAIN TO DIG AND REPLACED (SEE PLAN & PROFILE SHEETS)
●	SANITARY MANHOLE TO BE REPLACED OR REHABILITATED (SEE SCHEDULE ON SHEET C-43)
RTE	RIGHT TO ENTER DOCUMENT SIGNED BY PROPERTY OWNER

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(A)	EXISTING PIPE SEGMENT TO BE ABANDONED
SL	EXISTING SANITARY SEWER LATERAL
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---	SANITARY LATERAL REPLACEMENT
UNK	DISTANCE UNKNOWN
MH	EXISTING LATERAL TO BE CONNECTED TO EXISTING MANHOLE

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xxx - C	EXISTING TAP LOCATION TO BE DUG UP AND CAPPED/PLUGGED
xxx - E	EXISTING LATERAL CONNECTION - NO WORK NEEDED
xxx - R	DIG UP AND RECONNECT EXISTING PVC LATERAL TO CIPP LINED MAIN

NOTE: SOURCE OF 2015 AERIAL IMAGERY IS FROM MADISON COUNTY GIS.

DATE: MARCH 2017

SCALE: 1"=50'

SHEET NO: C-15

SCALE: 1" = 50'

JOSEPH P. TIERNY  
REGISTERED  
No. 19300407  
STATE OF INDIANA  
PROFESSIONAL ENGINEER

GRW PROJECT NO. 4447-24  
SRF NO. W16074803

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SANITARY SEWER  
REHABILITATION PLAN  
SEWER REHABILITATION PROJECT PHASE II  
TOWN OF PENDLETON, INDIANA

DESIGNED	GWL	GCR	GWL	JPT
BY	DATE	DATE	DATE	DATE

REVISIONS

NO.	DESCRIPTION	DATE

DATE: MARCH 2017

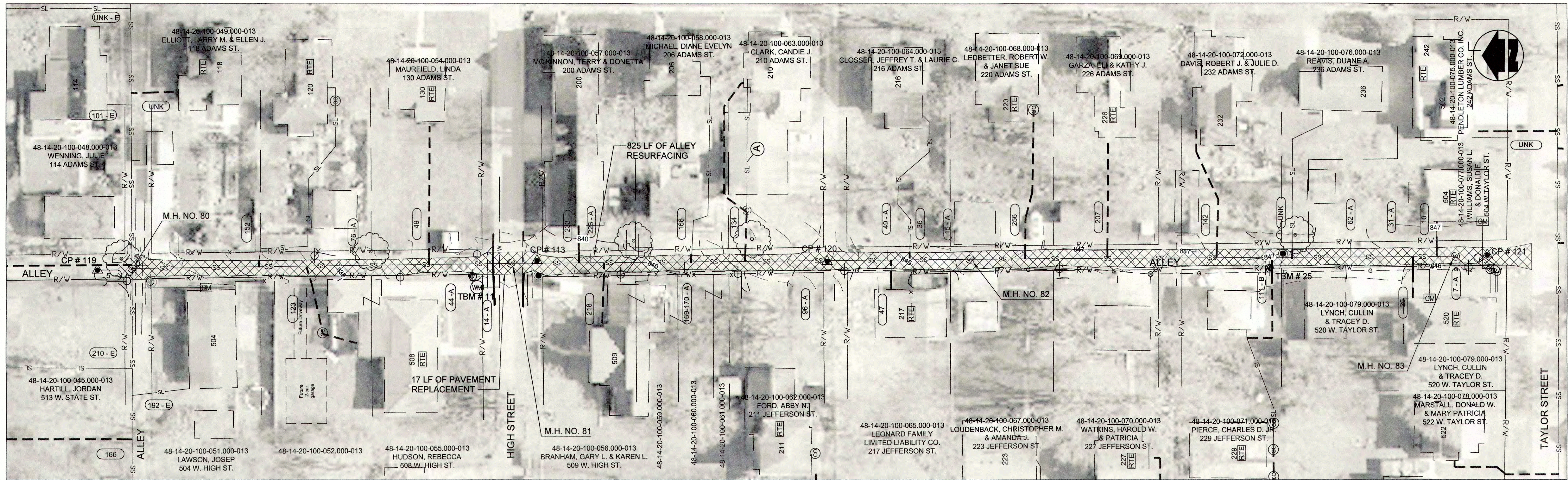
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SHEET NO: C-15

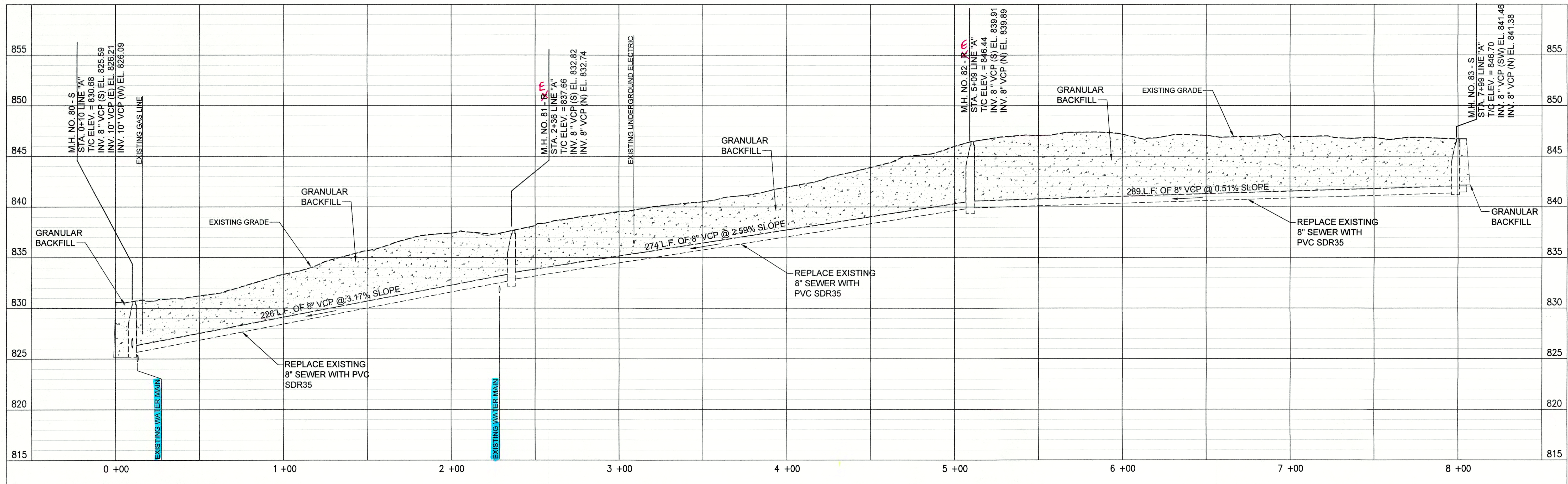


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PLAN VIEW - STA. 0+00 TO STA. 8+05 LINE "A" CIPP LINED PER BID ALTERNATE



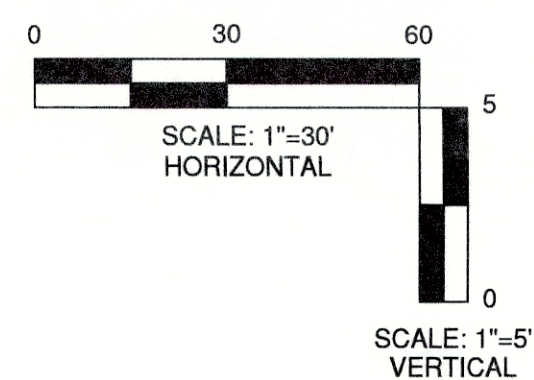
PROFILE - STA. 0+00 TO STA. 8+05 LINE "A"

PROPOSED LEGEND

	PROPOSED PERMANENT EASEMENT		PROPOSED SANITARY LATERAL
	PROPOSED RIGHT-OF-WAY		SURFACE RESTORATION AND BACKFILL
	PROPOSED SANITARY SEWER		

(A) PIPE SEGMENT TO BE ABANDONED

- NOTES:
- LETTERS SHOWN NEXT TO MANHOLE NUMBERS IN THE PROFILE CORRESPOND TO REHABILITATION SCHEDULE ON SHEET C-42.
  - SEE SHEETS C-01 THROUGH C-15 FOR NOTES ON LATERAL REHABILITATION WORK.



JOSEPH P. TIERNEY  
REGISTERED  
No. 19300407  
STATE OF INDIANA  
PROFESSIONAL ENGINEER

GRW PROJECT NO. 4447-24

SRF NO. WY16074803 -

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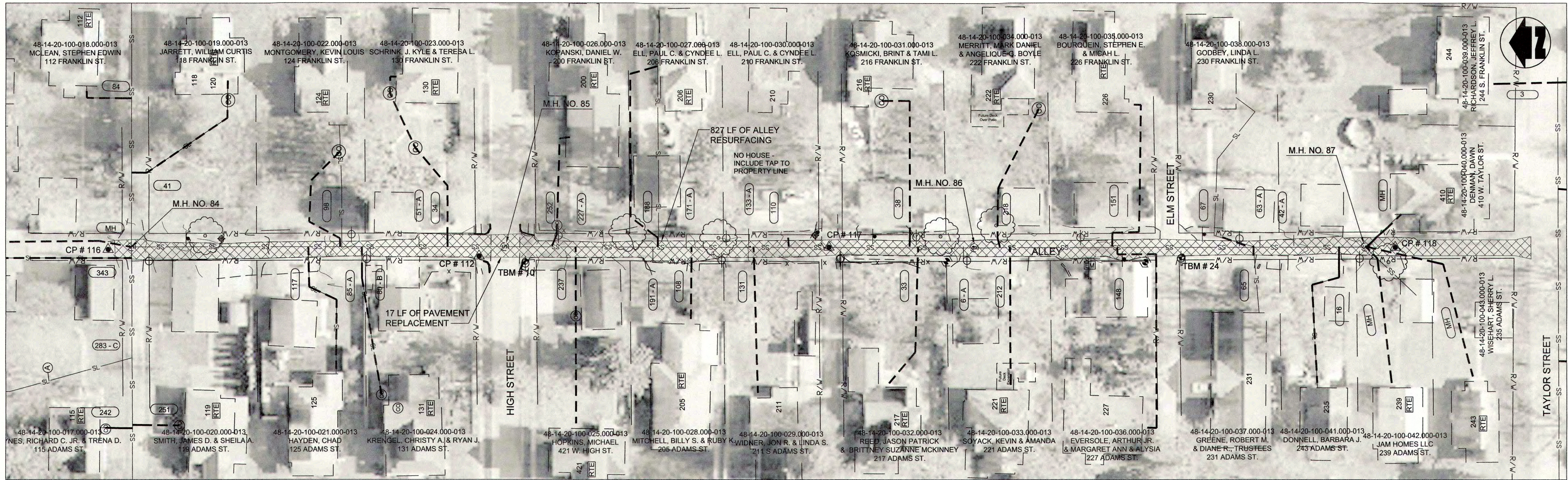
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PLAN AND PROFILE  
LINE "A"  
SEWER REHABILITATION PROJECT PHASE II  
TOWN OF PENDLETON, INDIANA

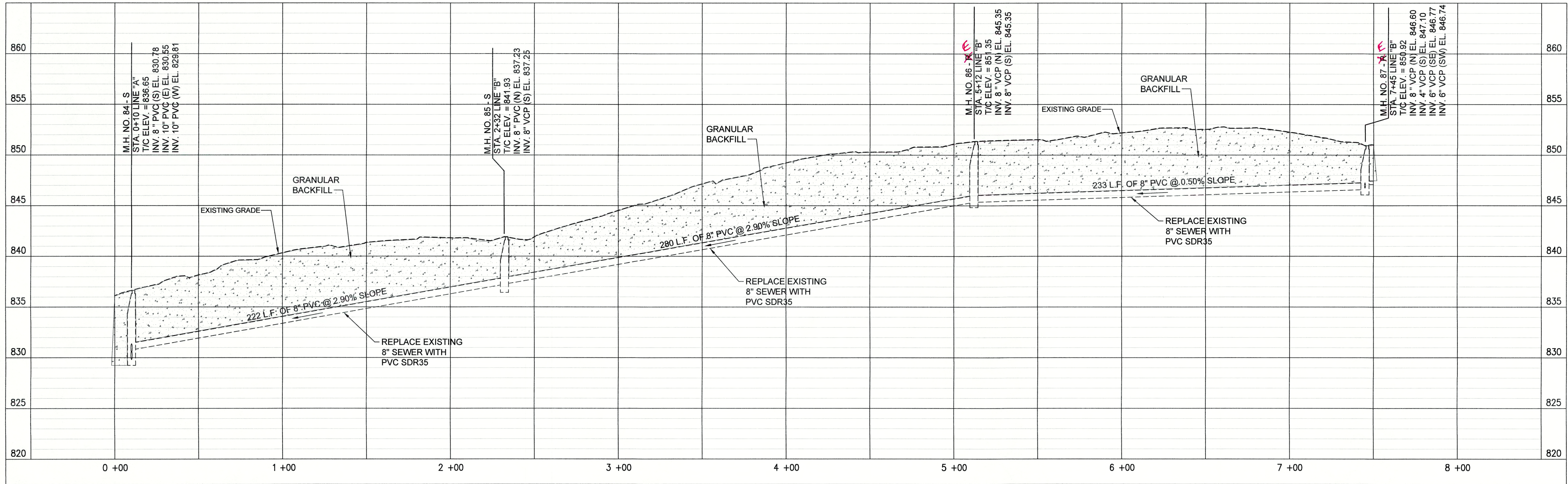
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NO.											
DATE	MARCH 2017										
SCALE:	H.-1"=30'; V.-1"=5'										
SHEET NO.	C-16										

SCALE CHECK: THIS MARK SHOULD MEASURE EXACTLY 1" WHEN PLOTTED





PLAN VIEW - STA. 0+00 TO STA. 7+50 LINE "B" CIPP LINED PER BID ALTERNATE



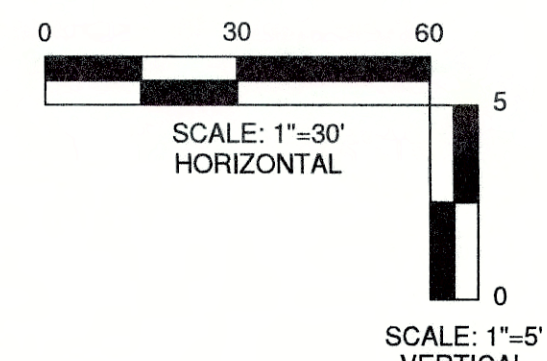
PROFILE - STA. 0+00 TO STA. 7+50 LINE "B"

PROPOSED LEGEND

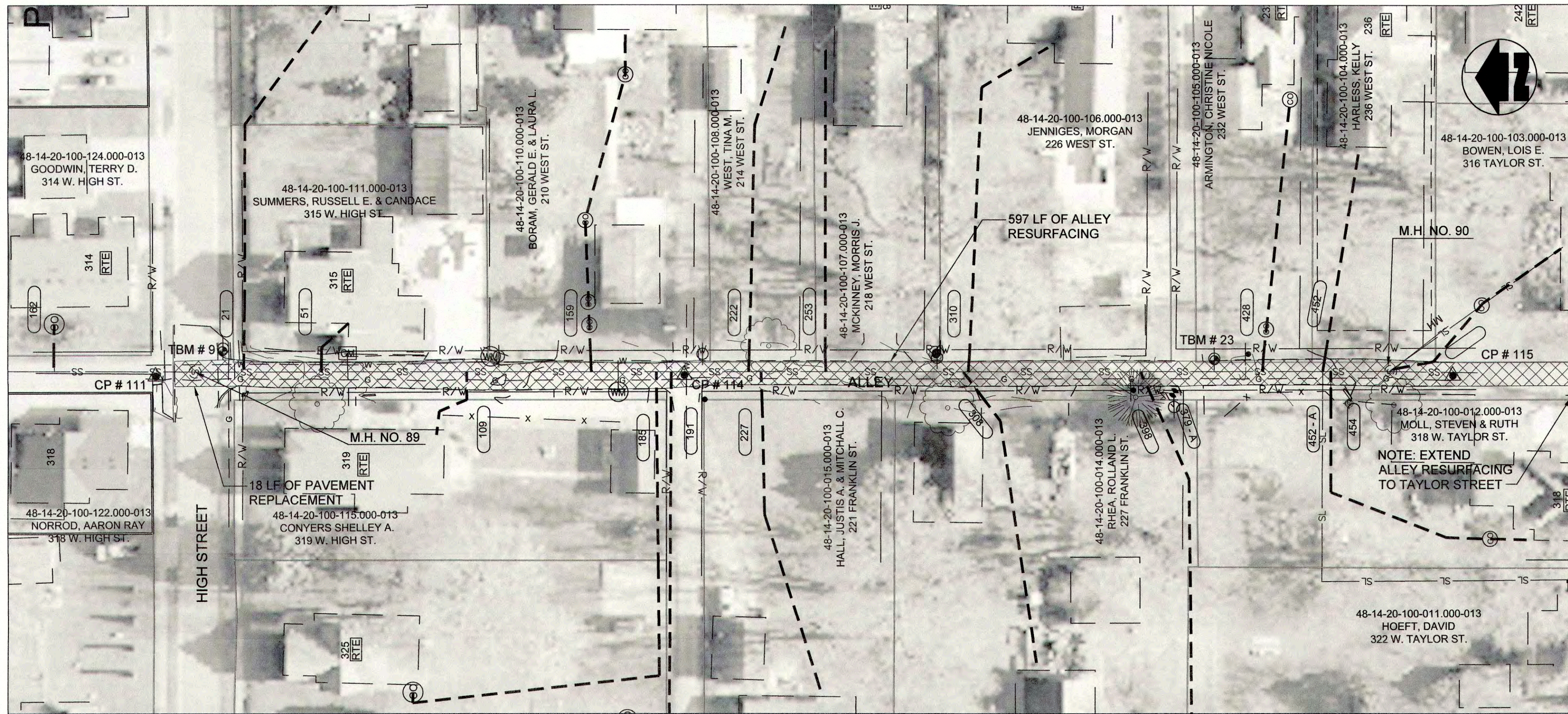
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|---|-----------------------------|---|----------------------------------|
| — | PROPOSED PERMANENT EASEMENT | — | PROPOSED SANITARY LATERAL        |
| — | PROPOSED RIGHT-OF-WAY       | — | SURFACE RESTORATION AND BACKFILL |
| — | PROPOSED SANITARY SEWER     |   |                                  |

(A) PIPE SEGMENT TO BE ABANDONED

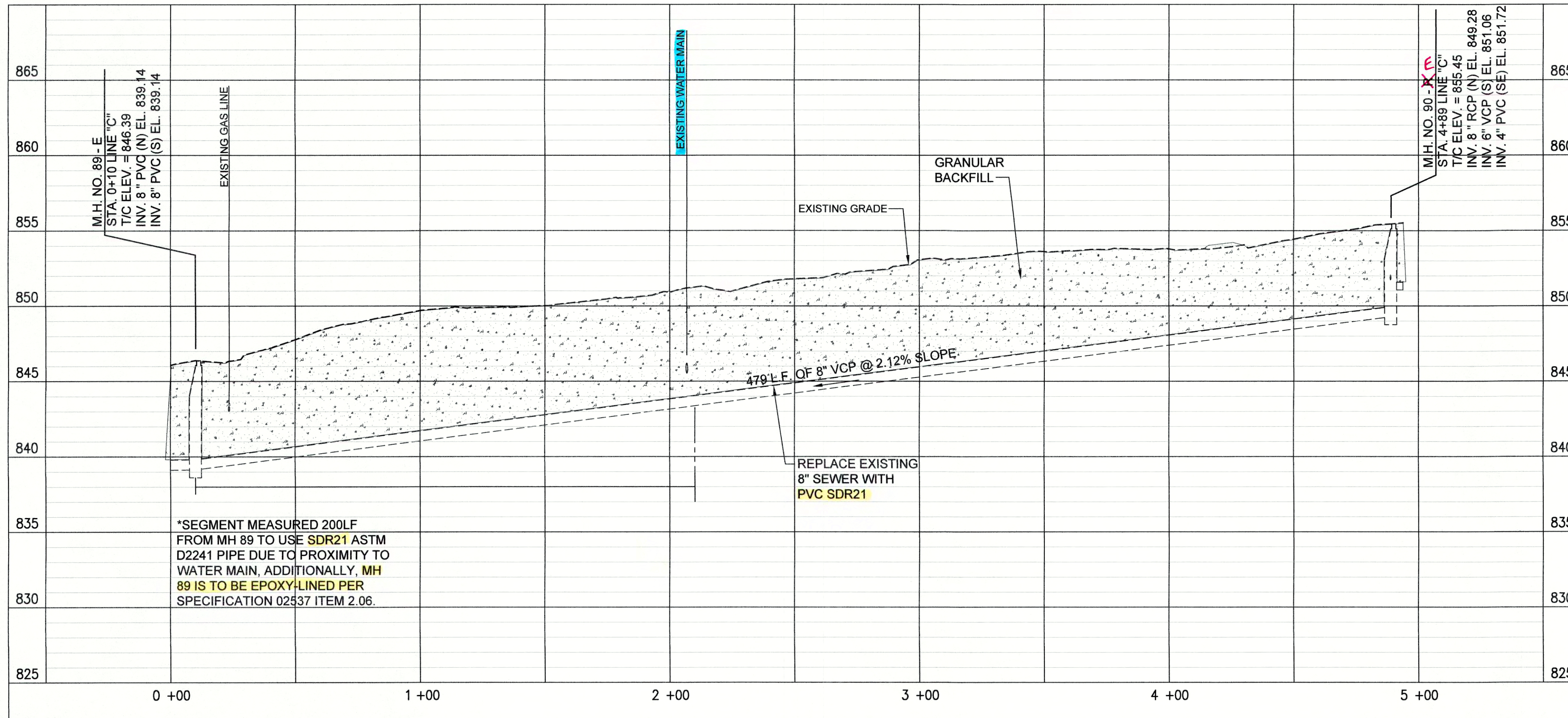
- NOTES:
- LETTERS SHOWN NEXT TO MANHOLE NUMBERS IN THE PROFILE CORRESPOND TO REHABILITATION SCHEDULE ON SHEET C-42.
  - SEE SHEETS C-01 THROUGH C-15 FOR NOTES ON LATERAL REHABILITATION WORK.







PLAN VIEW - STA. 0+00 TO STA. 4+95 LINE "C" CIPP LINED PER BID ALTERNATE



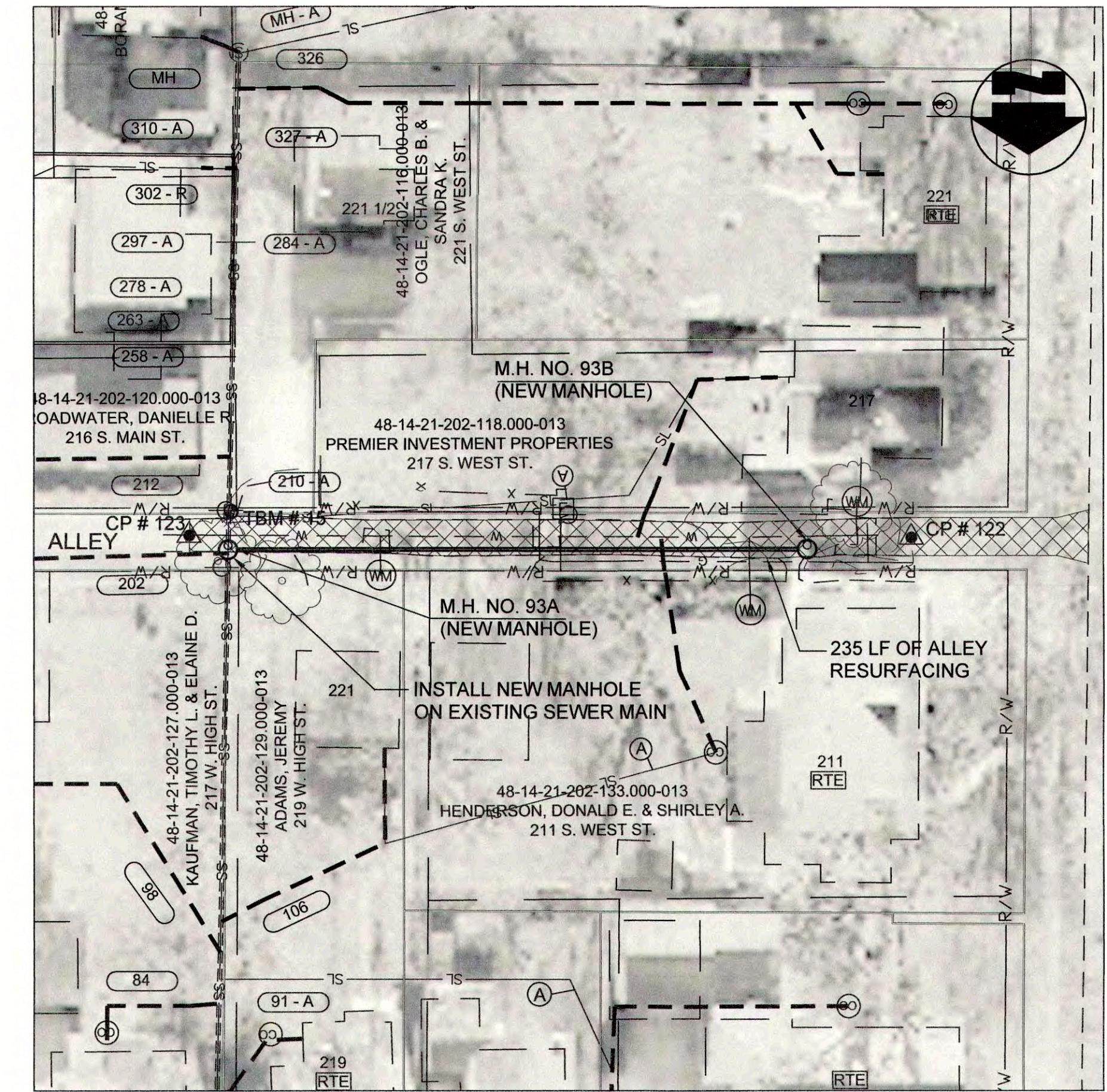
PROFILE - STA. 0+00 TO STA. 4+95 LINE "C"

(A) PIPE SEGMENT TO BE ABANDONED

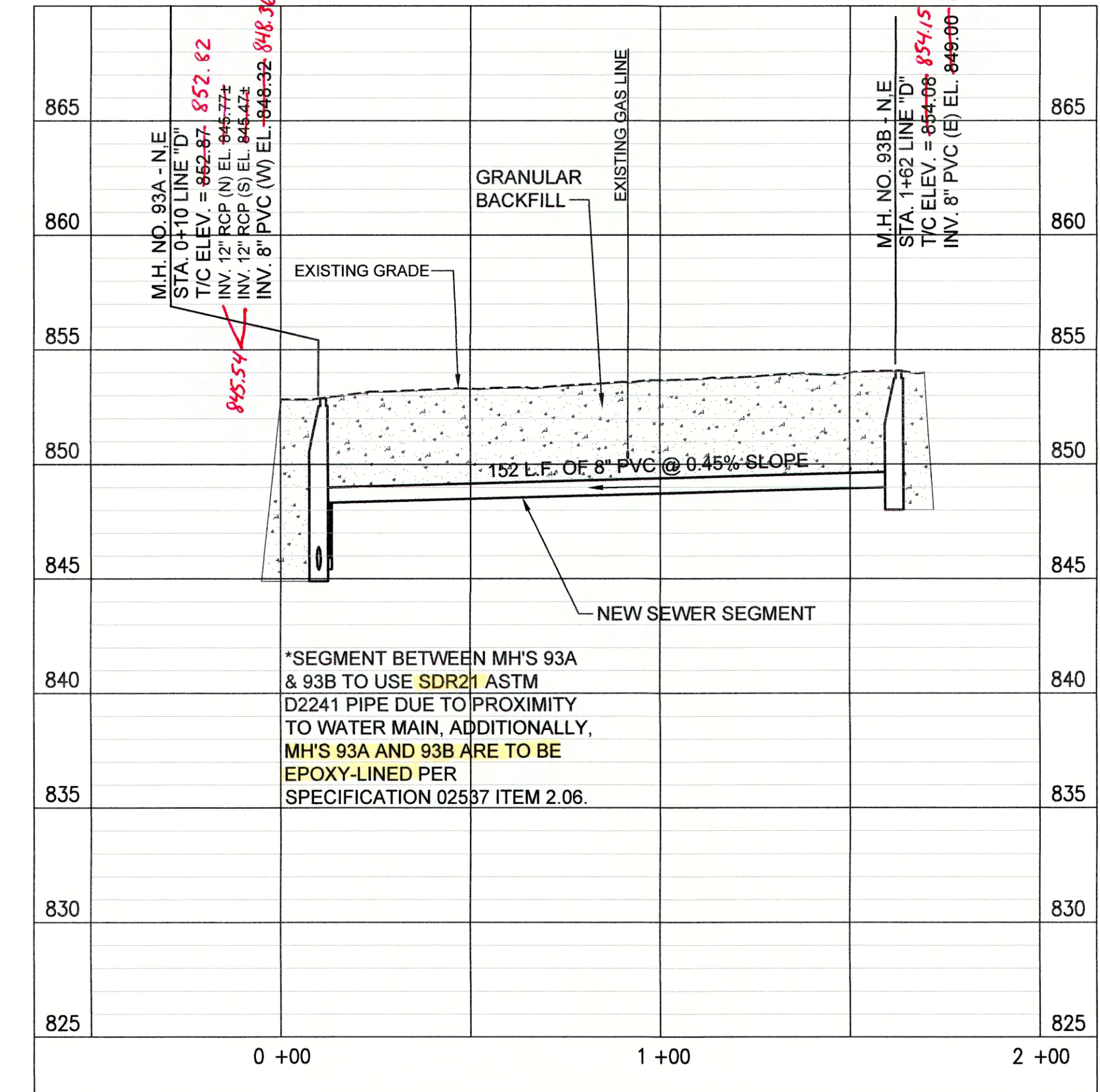
- NOTES:
- LETTERS SHOWN NEXT TO MANHOLE NUMBERS IN THE PROFILE CORRESPOND TO REHABILITATION SCHEDULE ON SHEET C-42.
  - SEE SHEETS C-01 THROUGH C-15 FOR NOTES ON LATERAL REHABILITATION WORK.

PROPOSED LEGEND

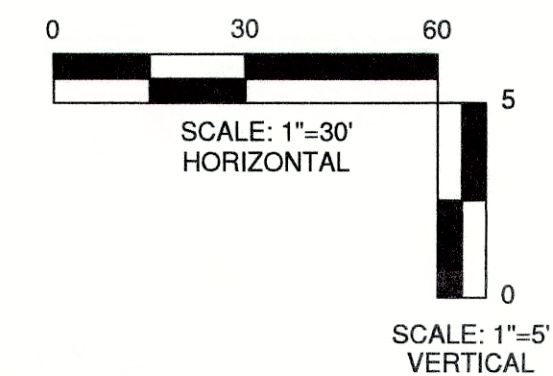
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|---|-----------------------------|---|----------------------------------|
| — | PROPOSED PERMANENT EASEMENT | — | PROPOSED SANITARY LATERAL        |
| — | PROPOSED RIGHT-OF-WAY       | — | SURFACE RESTORATION AND BACKFILL |
| — | PROPOSED SANITARY SEWER     |   |                                  |



PLAN VIEW - STA. 0+00 TO STA. 1+70 LINE "D"



PROFILE - STA. 0+00 TO STA. 1+70 LINE "D"

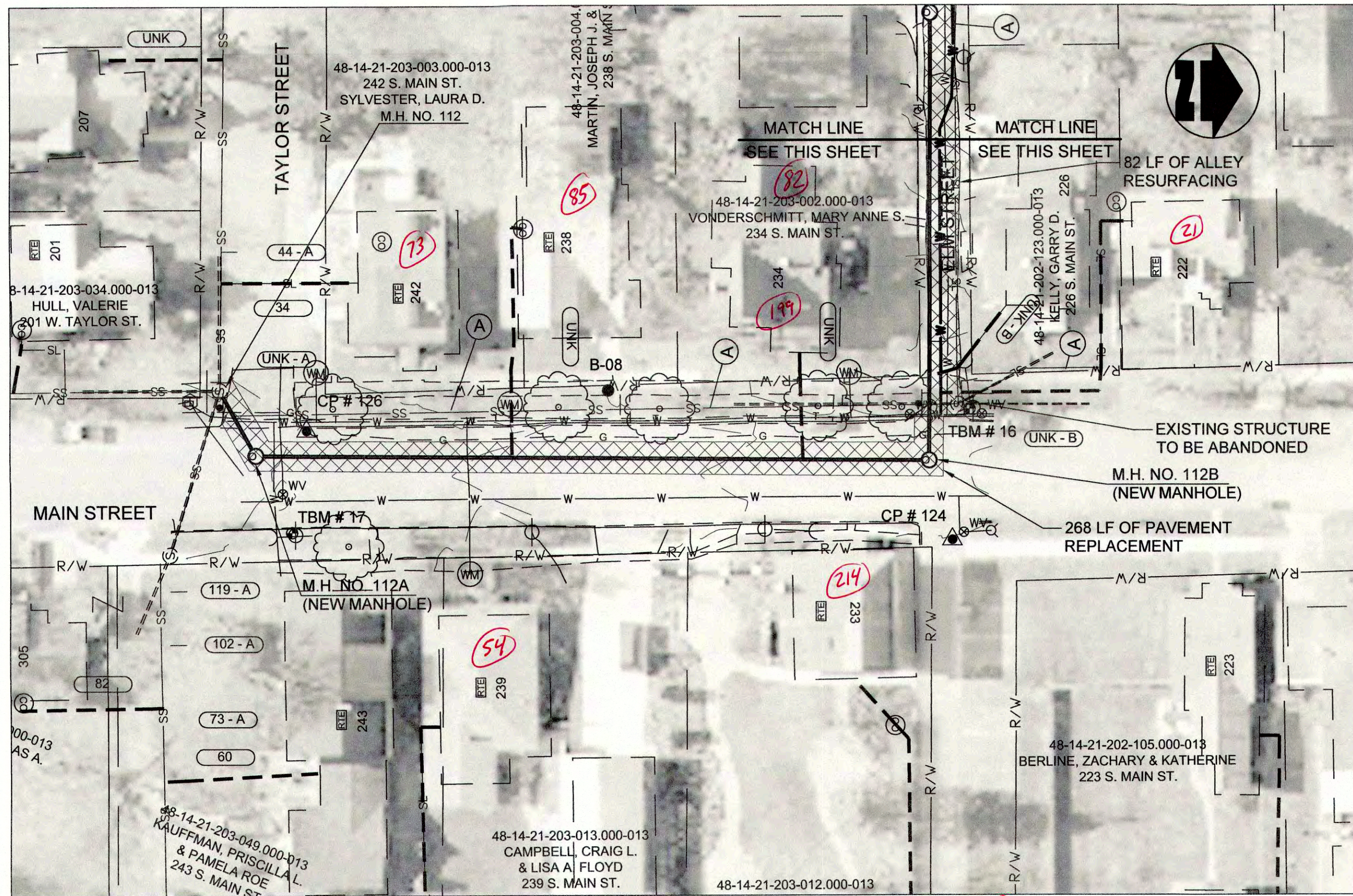


DESIGNED	GWL	GCR	GWL	JPT
DATE	BY	DATE	BY	DATE
NO.	DESCRIPTION	NO.	DESCRIPTION	NO.
SCALE CHECK: THIS MARK SHOULD MEASURE EXACTLY 1" WHEN PLOTTED				

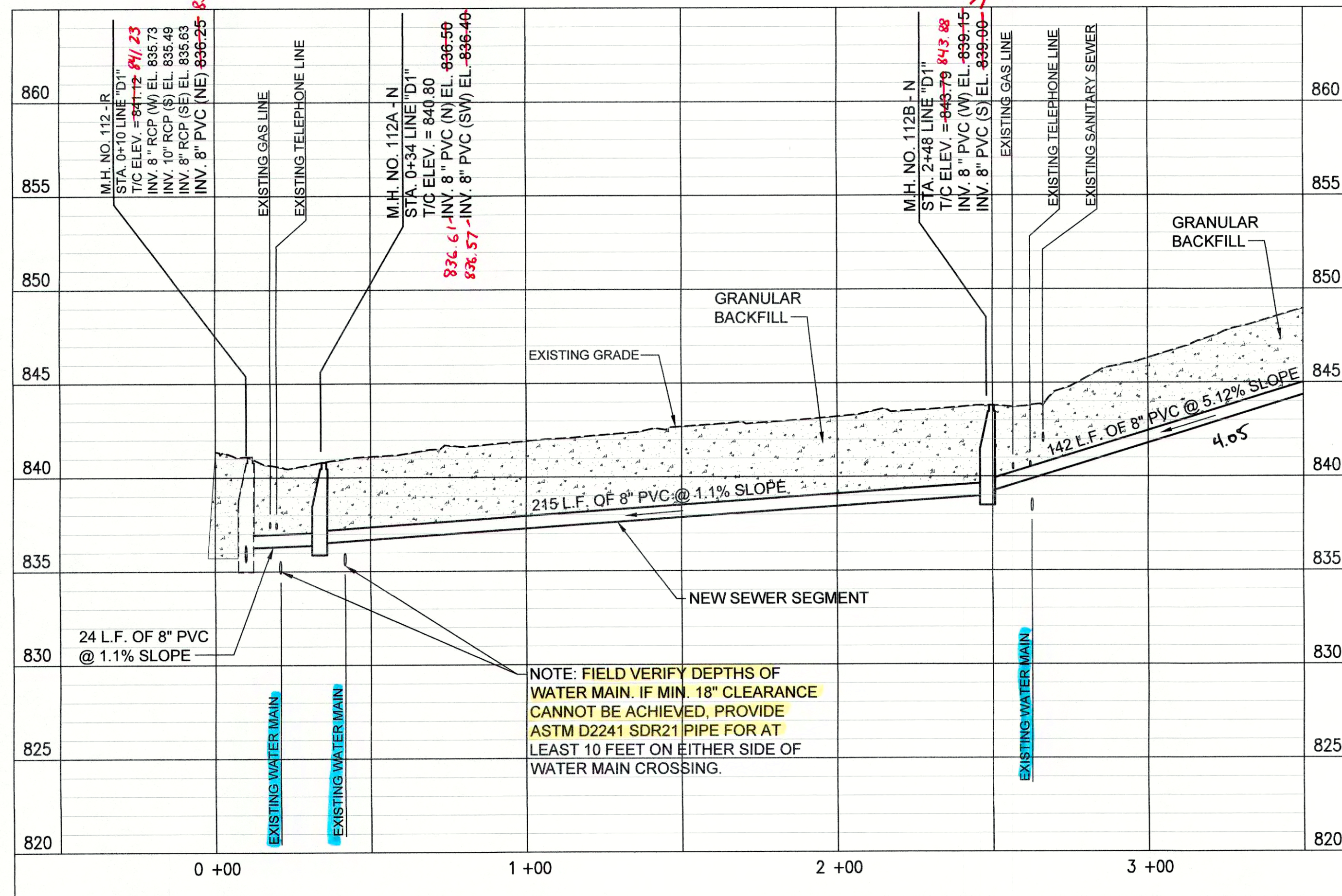


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FILE NAME: G:\4447-FCRWD-2015\Working Drawings\AutoCAD\REHABILITATION PHASE II\4447-24-C-19.dwg



PLAN VIEW - STA. 0+00 TO STA. 3+50 LINE "D1"



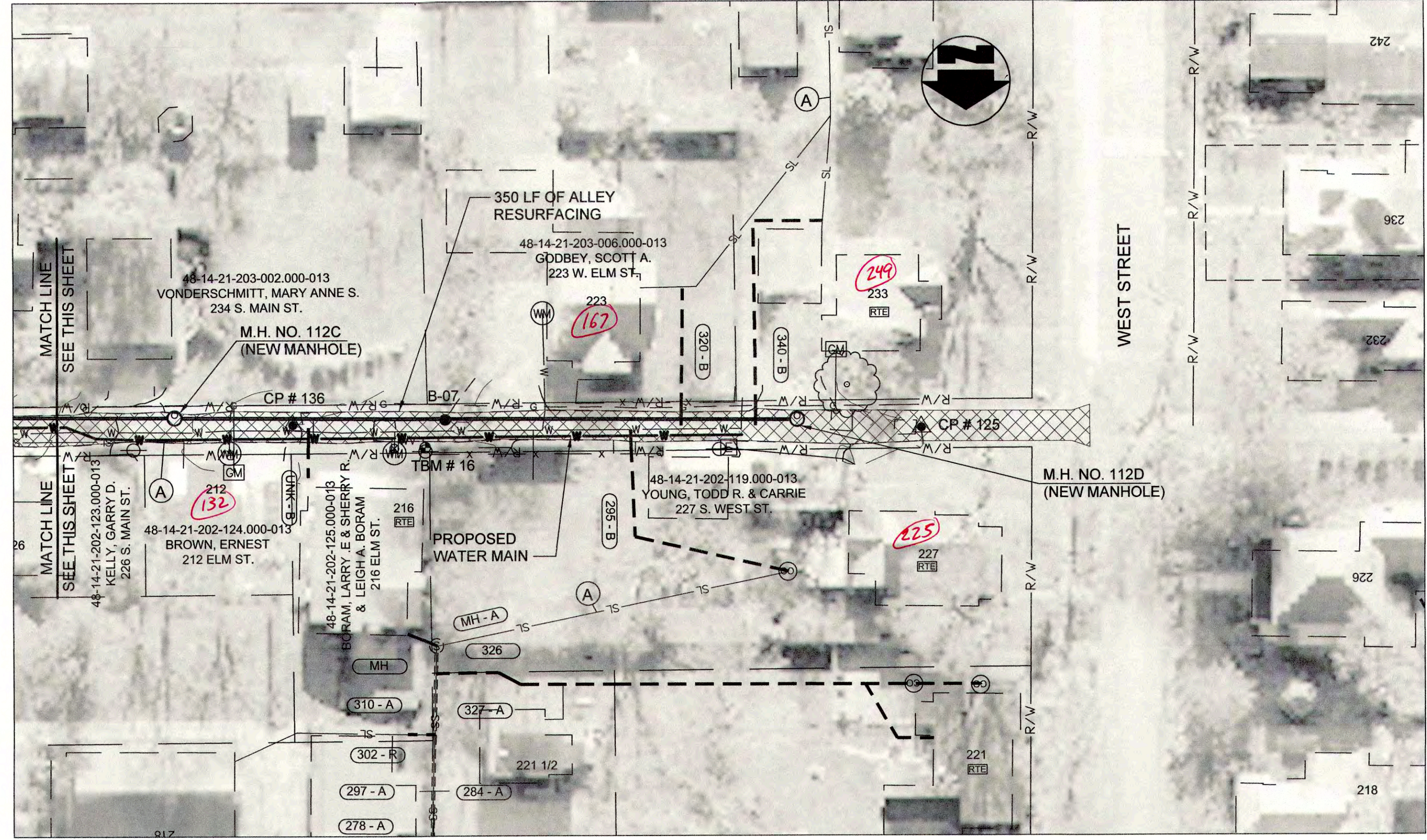
PROFILE - STA. 0+00 TO STA. 3+50 LINE "D1"

(A) PIPE SEGMENT TO BE ABANDONED

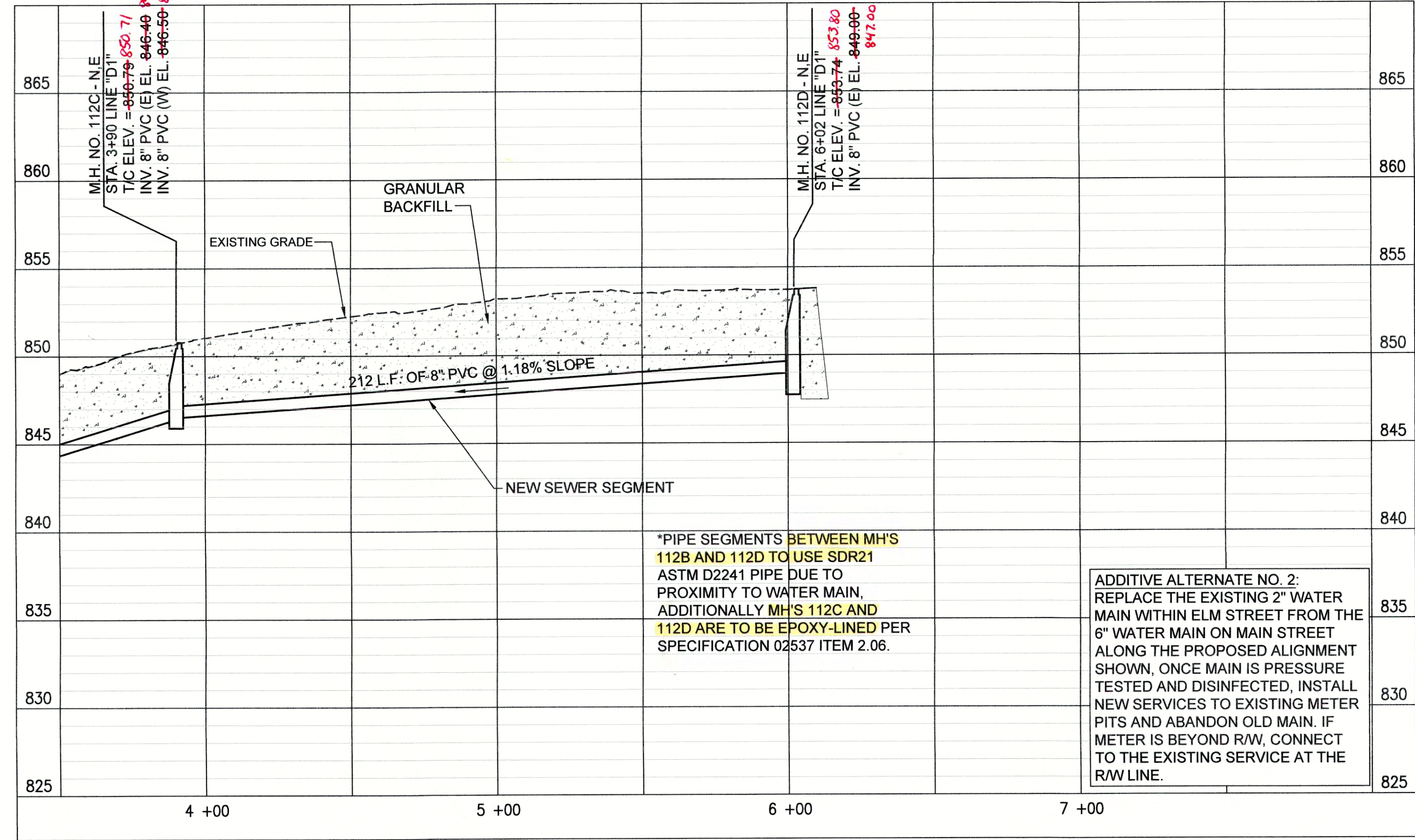
- NOTES:
- LETTERS SHOWN NEXT TO MANHOLE NUMBERS IN THE PROFILE CORRESPOND TO REHABILITATION SCHEDULE ON SHEET C-42.
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PROPOSED LEGEND

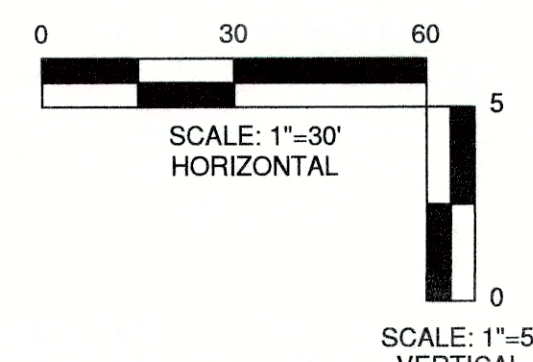
- |   |                             |   |                                  |
|---|-----------------------------|---|----------------------------------|
| — | PROPOSED PERMANENT EASEMENT | — | PROPOSED SANITARY LATERAL        |
| — | PROPOSED RIGHT-OF-WAY       | — | SURFACE RESTORATION AND BACKFILL |
| — | PROPOSED SANITARY SEWER     |   |                                  |



PLAN VIEW - STA. 3+50 TO STA. 6+10 LINE "D1"



PROFILE - STA. 3+50 TO STA. 6+10 LINE "D1"



JOSEPH P. TIERNEY  
REGISTERED  
No. 19300407  
STATE OF INDIANA  
PROFESSIONAL ENGINEER

GRW PROJECT NO. 4447-24  
SRF NO. WW16074803 -

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PLAN AND PROFILE  
LINE "D1"  
SEWER REHABILITATION PROJECT PHASE II  
TOWN OF PENDLETON, INDIANA

DESIGNED		DRAWN		REVIEWED		APPROVED	
NO.	DATE	NO.	DATE	NO.	DATE	NO.	DATE

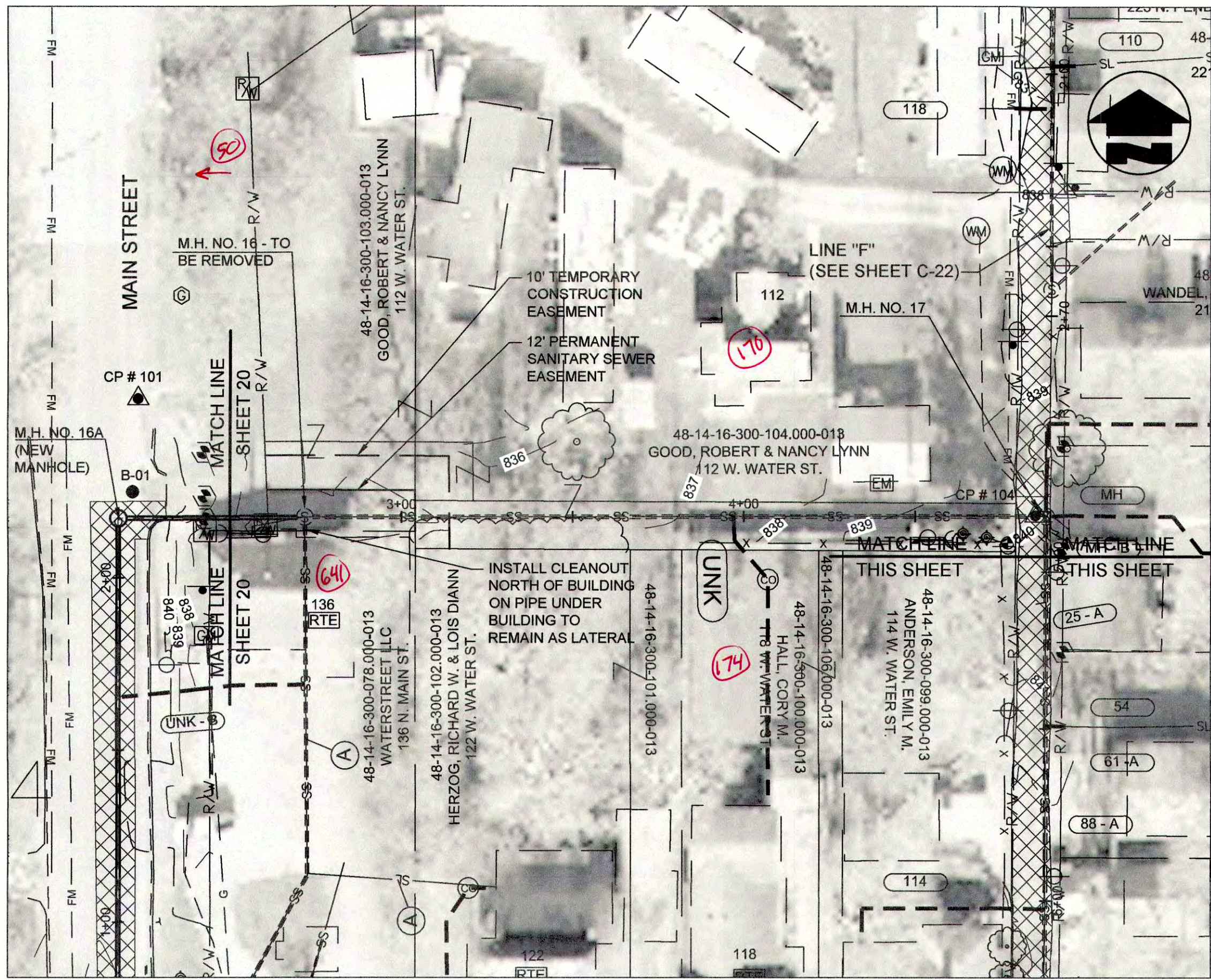
DATE: MARCH 2017  
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SHEET NO.

C-19

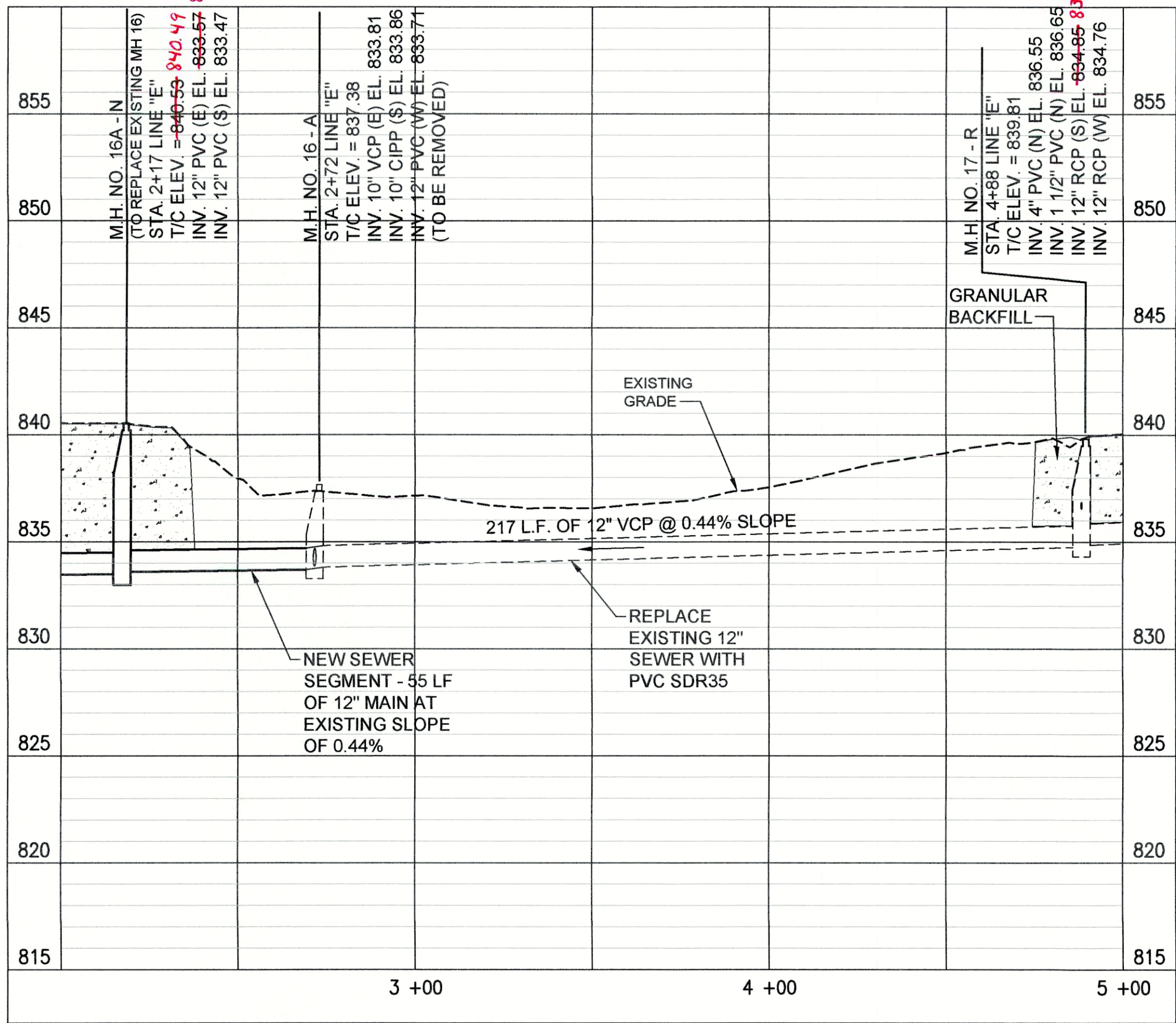




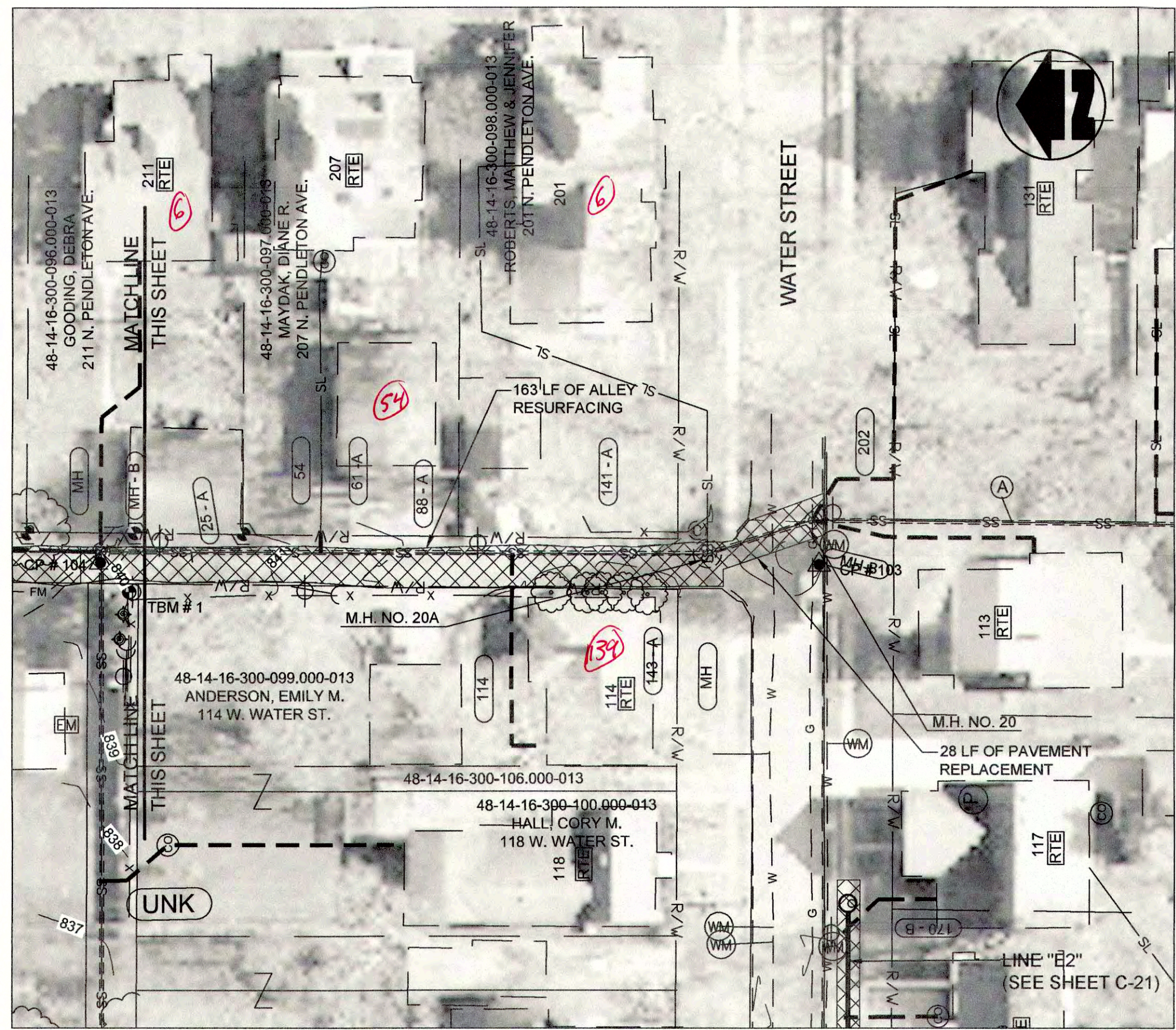




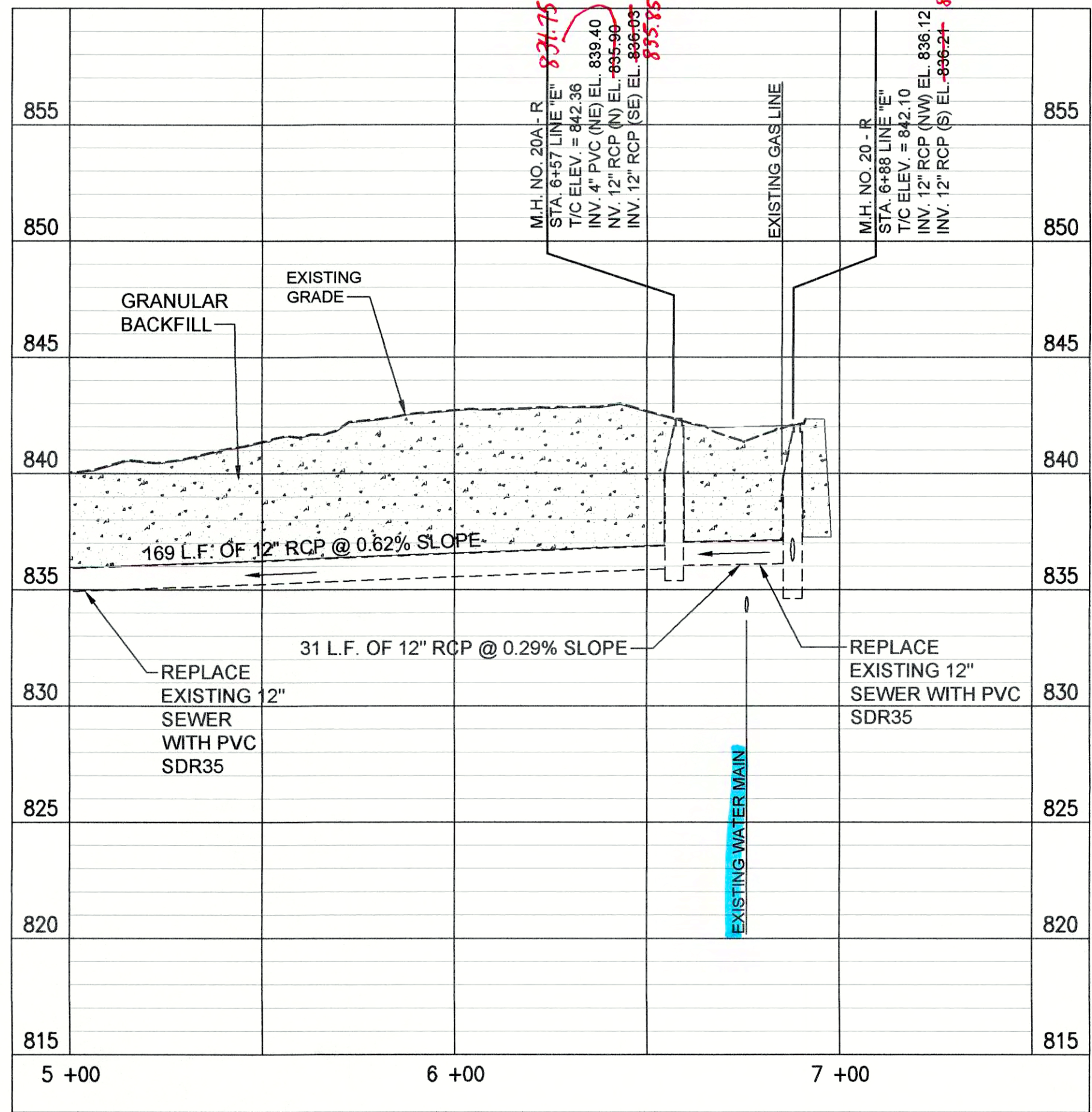
PLAN VIEW - STA. 2+50 TO STA. 5+00 LINE "E"



PROFILE - STA. 2+50 TO STA. 5+00 LINE "E"



PLAN VIEW - STA. 5+00 TO STA. 7+00 LINE "E"



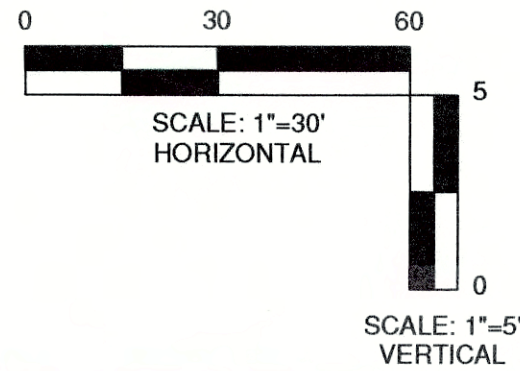
PROFILE - STA. 5+00 TO STA. 7+00 LINE "E"

(A) PIPE SEGMENT TO BE ABANDONED

- NOTES:
- LETTERS SHOWN NEXT TO MANHOLE NUMBERS IN THE PROFILE CORRESPOND TO REHABILITATION SCHEDULE ON SHEET C-42.
  - SEE SHEETS C-01 THROUGH C-15 FOR NOTES ON LATERAL REHABILITATION WORK.

PROPOSED LEGEND

- |   |                             |   |                                  |
|---|-----------------------------|---|----------------------------------|
| — | PROPOSED PERMANENT EASEMENT | — | PROPOSED SANITARY LATERAL        |
| — | PROPOSED RIGHT-OF-WAY       | — | SURFACE RESTORATION AND BACKFILL |
| — | PROPOSED SANITARY SEWER     |   |                                  |



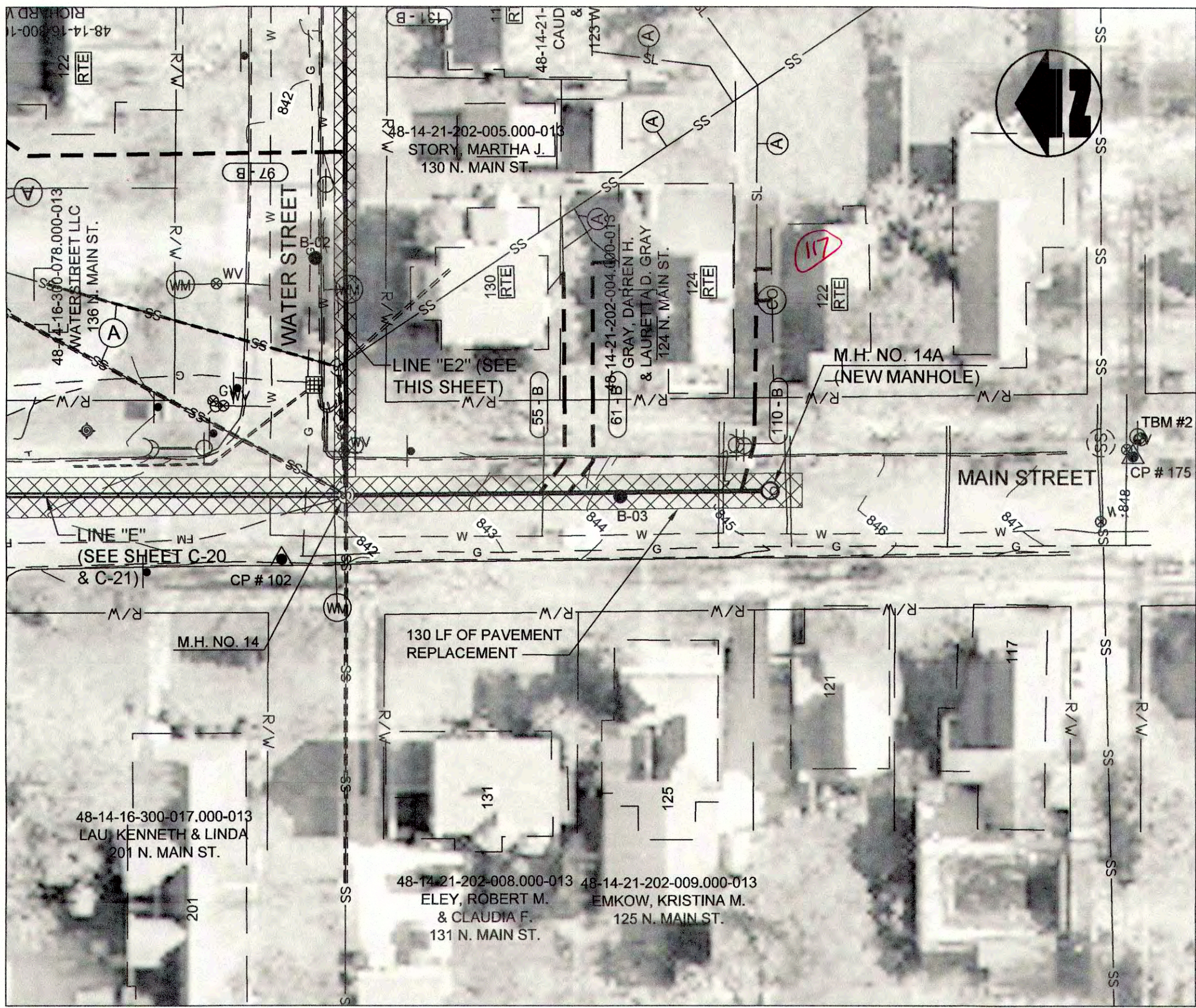
DESIGNED		GWL		GCR		GWL		JPT	
DATE		BY		DATE		BY		DATE	
REVISIONS		DESCRIPTION		REVIEWED		APPROVED		SCALE CHECK	
DATE		MARCH 2017		SCALE		H.-1"=30', V.-1"=5'		SHEET NO.	
C-21									

JOSEPH P. TIERNEY  
REGISTERED  
No. 19300407  
STATE OF INDIANA  
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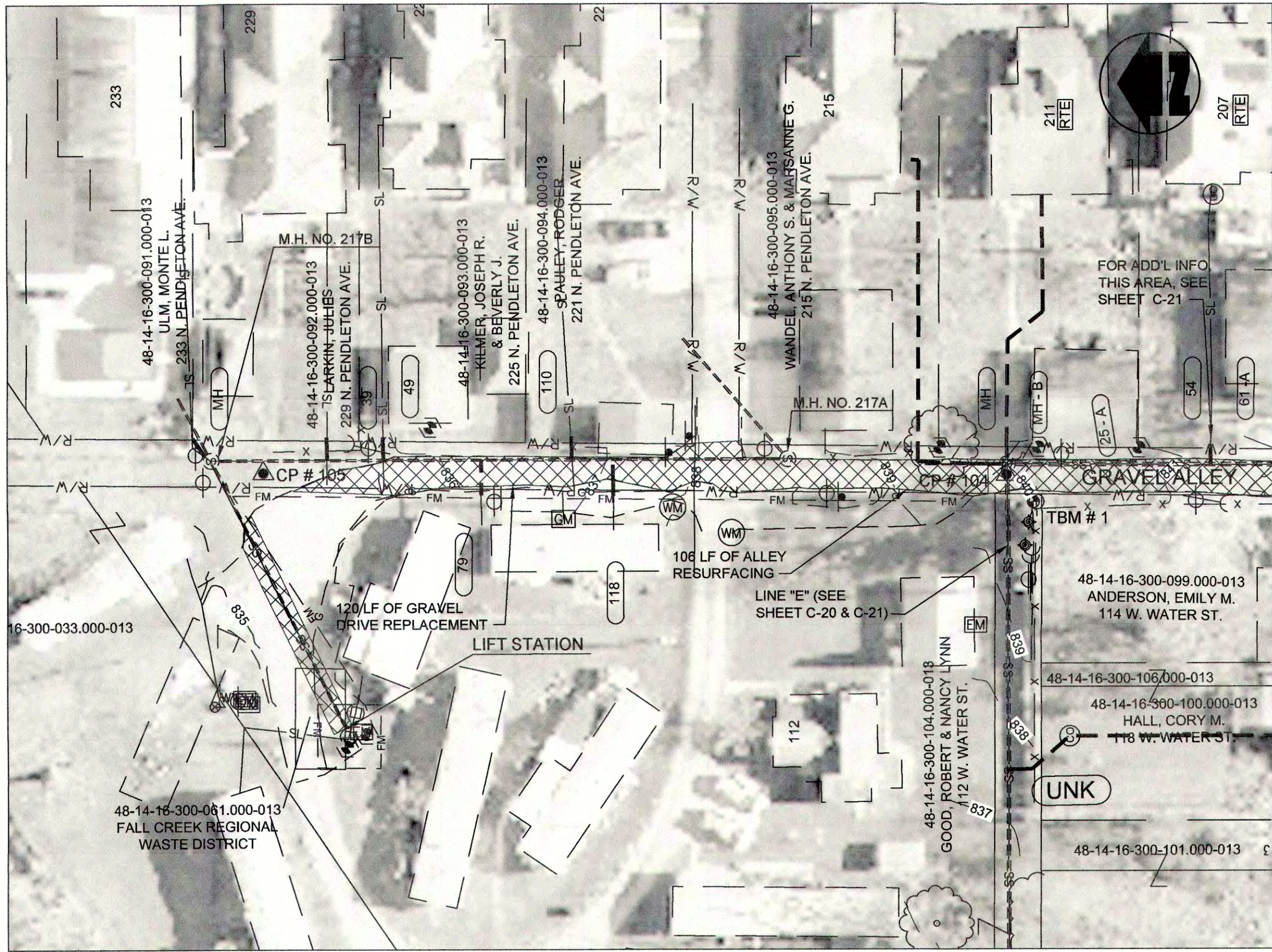
GRW PROJECT NO. 4447-24  
SRF NO. WW16074803 -  
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PLAN AND PROFILE  
LINE "E"  
SEWER REHABILITATION PROJECT PHASE II  
TOWN OF PENDLETON, INDIANA

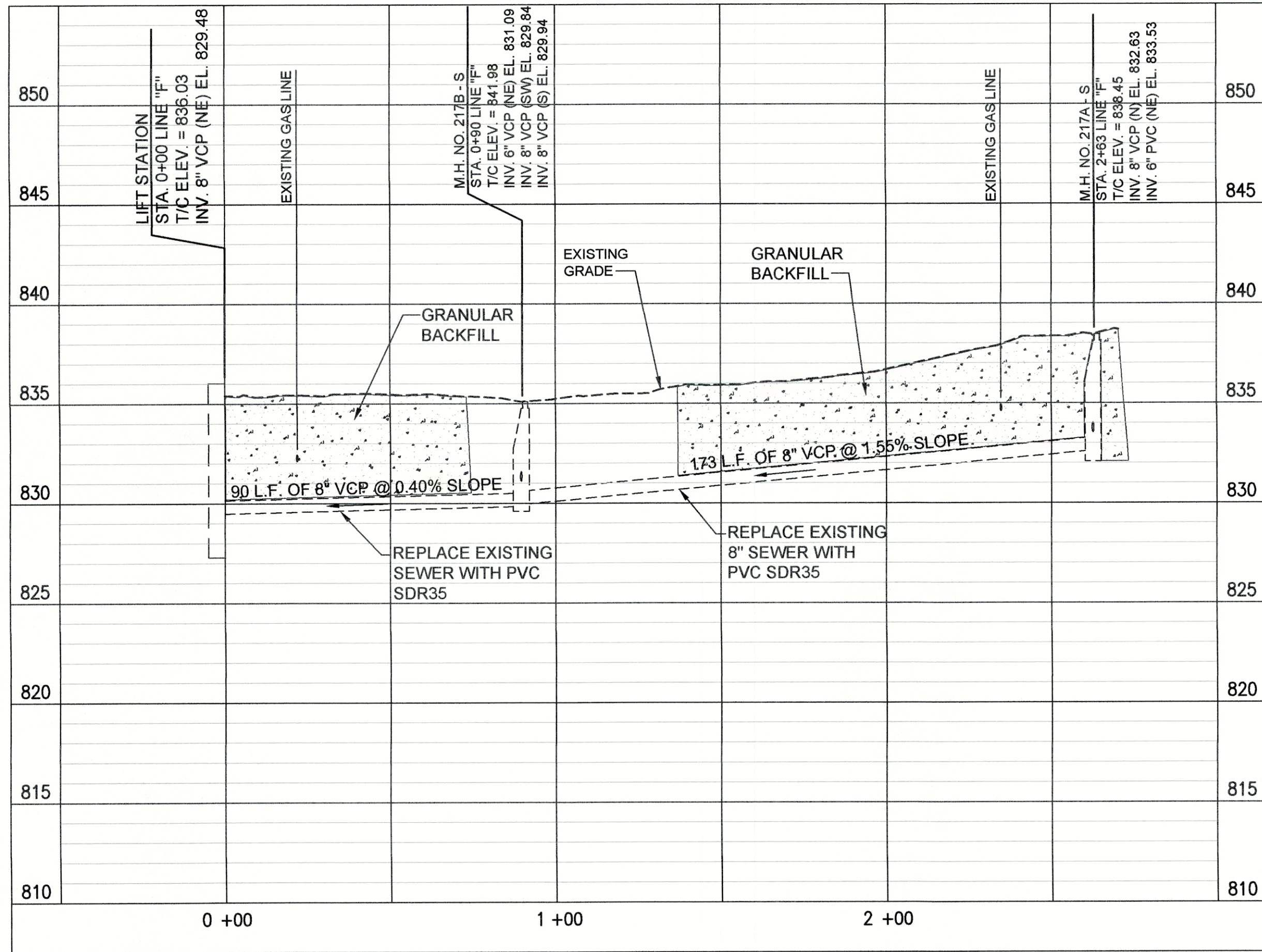




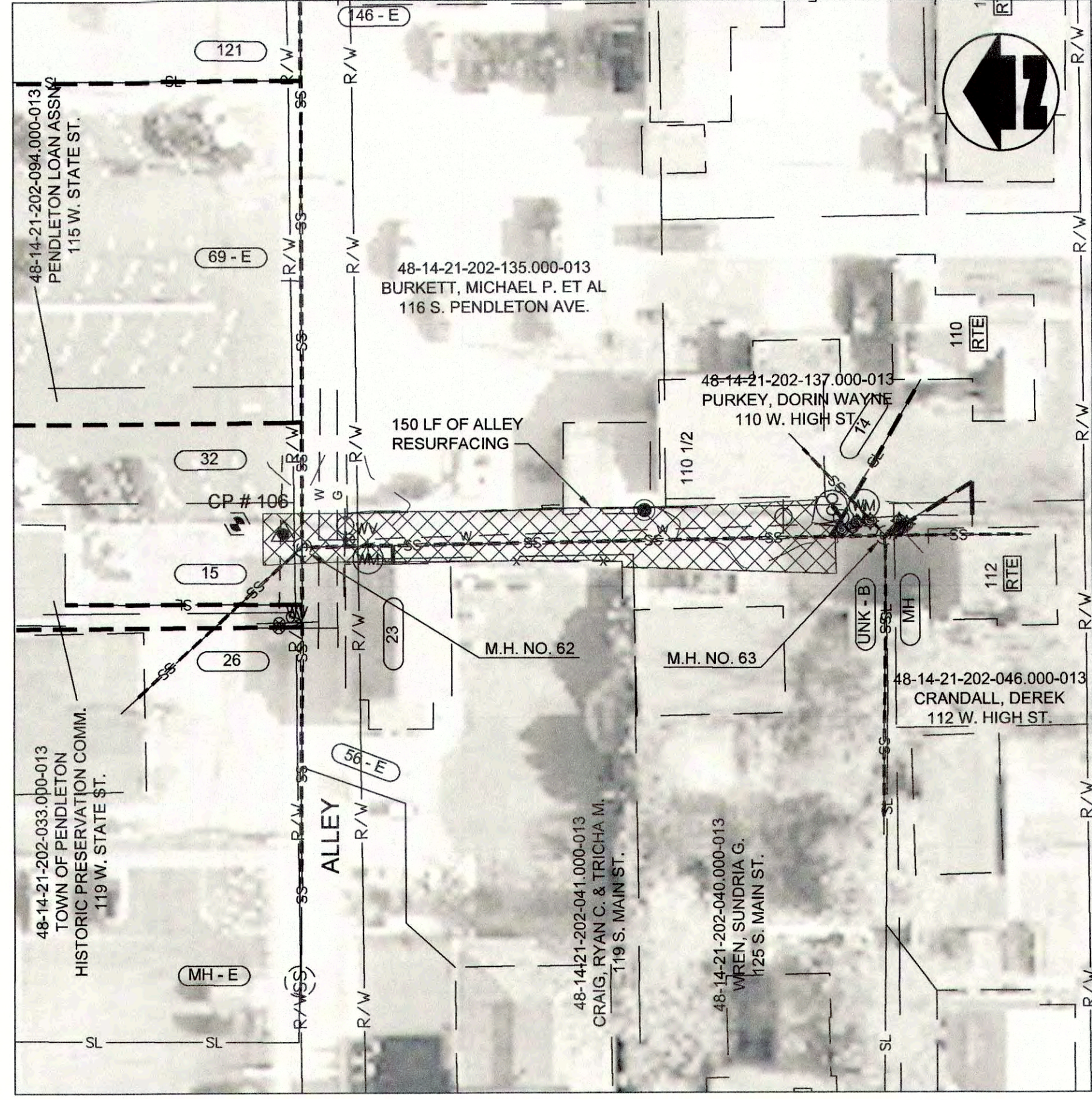




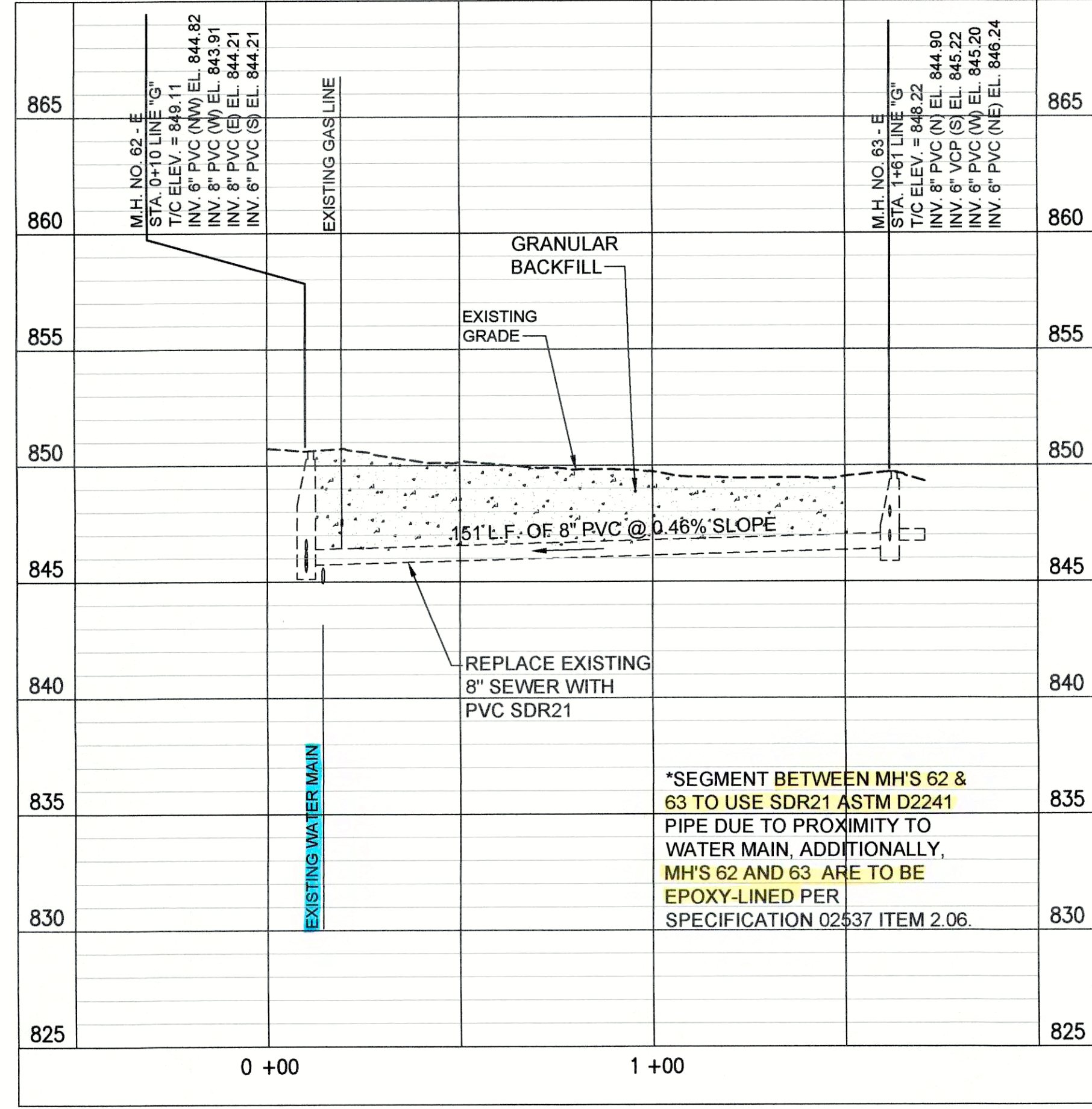
PLAN VIEW - STA. 0+00 TO STA. 2+70 LINE "F" CIPP LINED PER BID ALTERNATE



PROFILE - STA. 0+00 TO STA. 2+70 LINE "F"



PLAN VIEW - STA. 0+00 TO STA. 2+70 LINE "G"



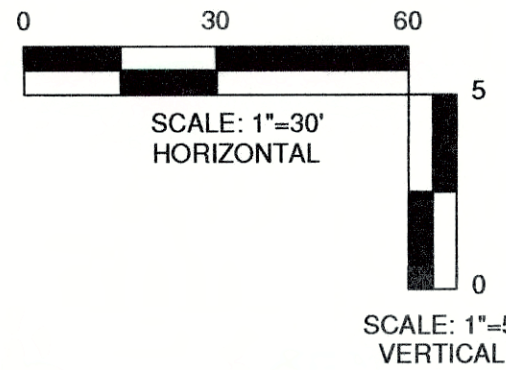
PROFILE - STA. 0+00 TO STA. 1+60 LINE "G"

PROPOSED LEGEND

- PROPOSED PERMANENT EASEMENT
- PROPOSED RIGHT-OF-WAY
- PROPOSED SANITARY SEWER
- PROPOSED SANITARY LATERAL
- SURFACE RESTORATION AND BACKFILL

(A) PIPE SEGMENT TO BE ABANDONED

- NOTES:
- LETTERS SHOWN NEXT TO MANHOLE NUMBERS IN THE PROFILE CORRESPOND TO REHABILITATION SCHEDULE ON SHEET C-42.
  - SEE SHEETS C-01 THROUGH C-15 FOR NOTES ON LATERAL REHABILITATION WORK.



JOSEPH P. TIERNEY  
REGISTERED  
No. 19300407  
STATE OF INDIANA  
PROFESSIONAL ENGINEER

GRW PROJECT NO. 4447-24  
SRF NO. WW16074503 --

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PLAN AND PROFILE  
LINE "F" AND LINE "G"  
SEWER REHABILITATION PROJECT PHASE II  
TOWN OF PENDELTON, INDIANA

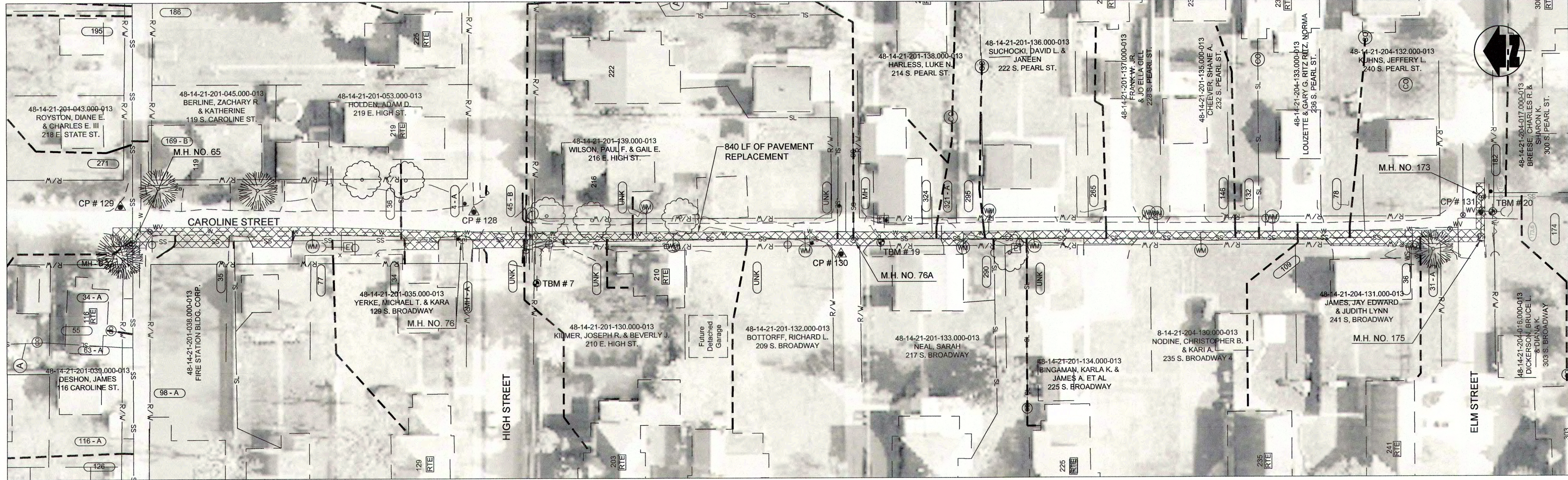
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GCR	---	---
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JPT	---	---

REVISIONS  
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1. THIS MARK SHOULD MEASURE EXACTLY 1" WHEN PLOTTED

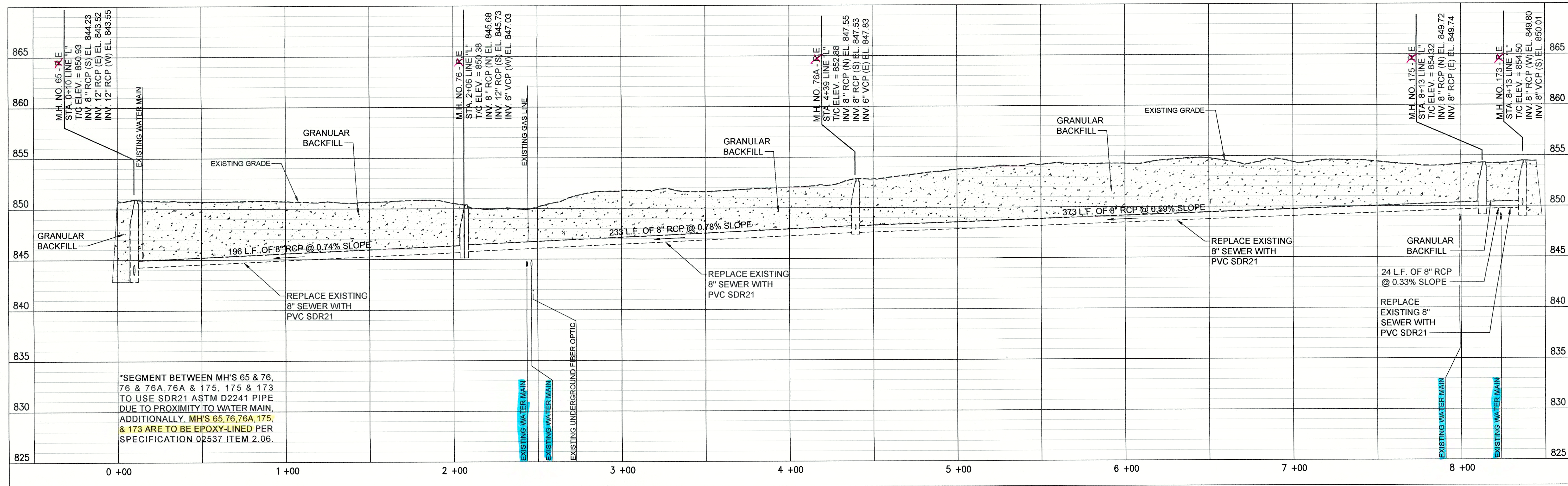
SCALE CHECK  
DATE  
MARCH 2017  
SCALE:  
H.-1"=30', V.-1"=5'  
SHEET NO.

C-23





PLAN VIEW - STA. 0+00 TO STA. 8+20 LINE "I" CIPP LINED PER BID ALTERNATE



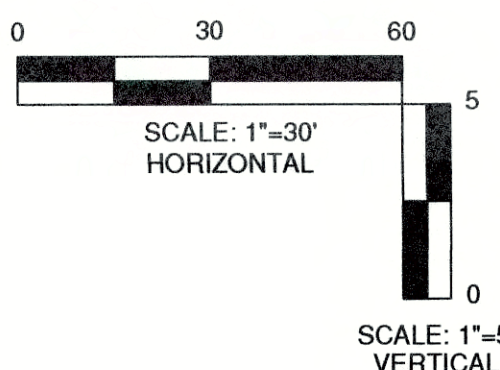
PROFILE - STA. 0+00 TO STA. 8+20 LINE "I"

PROPOSED LEGEND

- PROPOSED PERMANENT EASEMENT
- PROPOSED RIGHT-OF-WAY
- PROPOSED SANITARY SEWER
- PROPOSED SANITARY LATERAL
- SURFACE RESTORATION AND BACKFILL

(A) PIPE SEGMENT TO BE ABANDONED

- NOTES:
- LETTERS SHOWN NEXT TO MANHOLE NUMBERS IN THE PROFILE CORRESPOND TO REHABILITATION SCHEDULE ON SHEET C-42.
  - SEE SHEETS C-01 THROUGH C-15 FOR NOTES ON LATERAL REHABILITATION WORK.



JOSEPH P. TIERNEY  
REGISTERED  
No. 19300407  
STATE OF INDIANA  
PROFESSIONAL ENGINEER

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GRW PROJECT NO. 4447-24

SRF NO. WW16074803 --

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PLAN AND PROFILE

LINE "I"

SEWER REHABILITATION PROJECT PHASE II

TOWN OF PENDELTON, INDIANA

REVISIONS	
NO.	DESCRIPTION

DESIGNED	BY	DATE	DATE	DATE
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GCR				
GWL				
JPT				

DATE: MARCH 2017

SCALE: H.-1"=30', V.-1"=5'

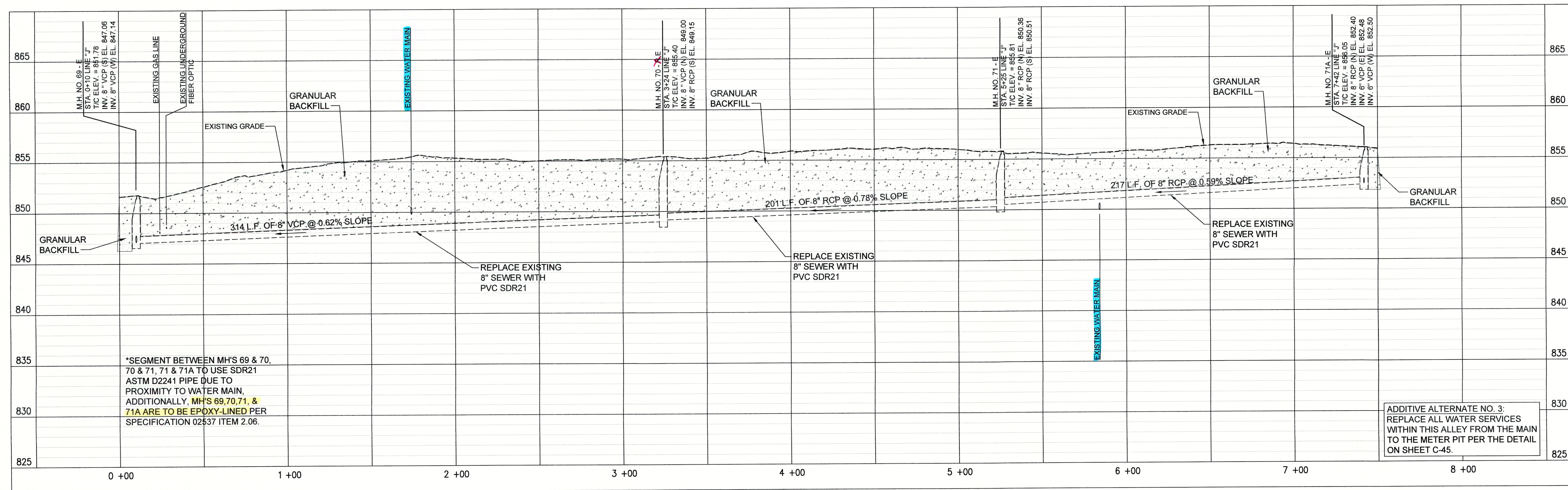
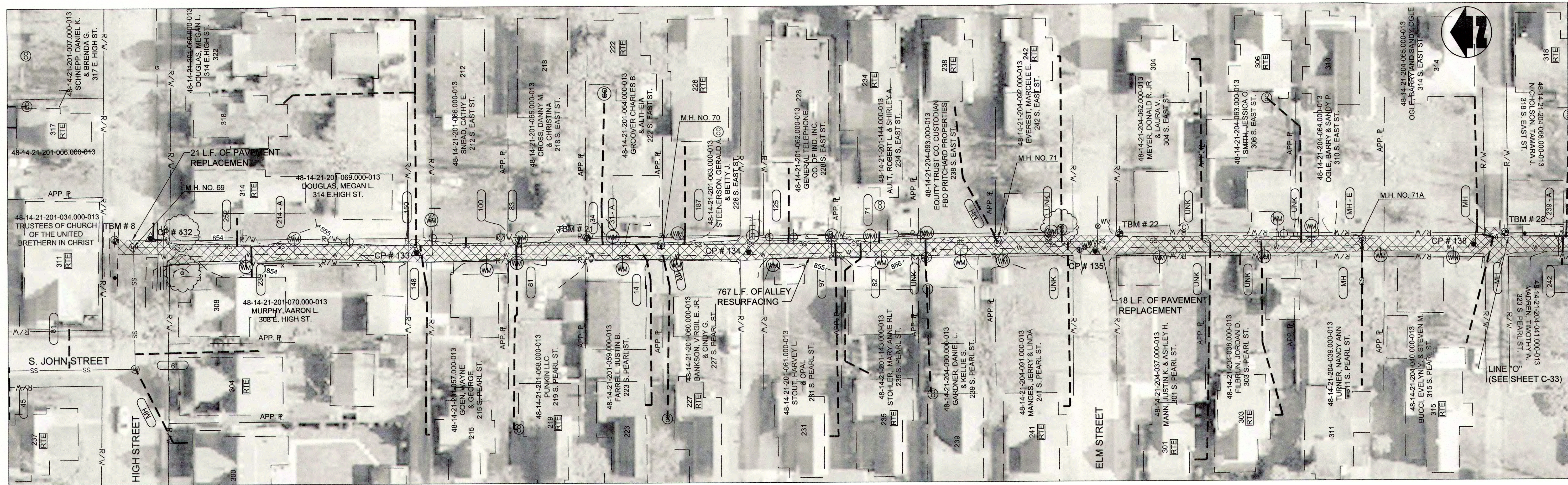
SHEET NO.

THIS MARK SHOULD MEASURE EXACTLY 1" WHEN PLOTTED

SCALE CHECK: 1" = 30'

C-24





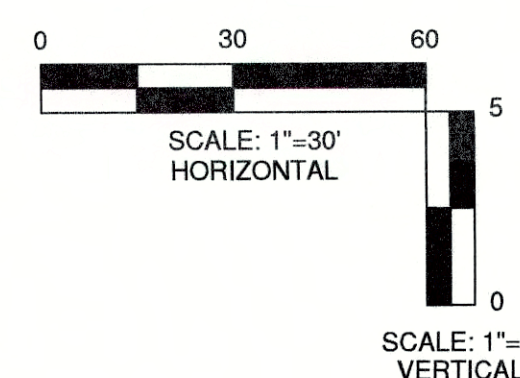


### PROPOSED LEGEND

- (A) PIPE SEGMENT TO BE ABANDONED

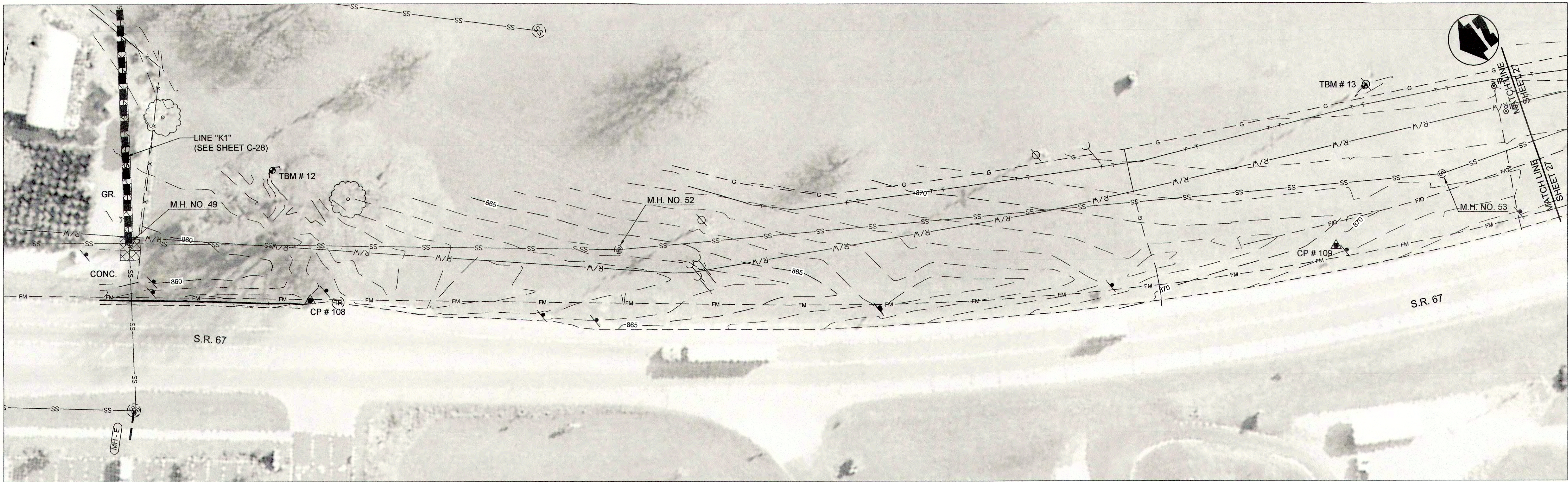
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  2. SEE SHEETS C-01 THROUGH C-15 FOR NOTES ON LATERAL REHABILITATION WORK.

	PROPOSED PERMANENT EASEMENT			PROPOSED SANITARY LATERAL
	PROPOSED RIGHT-OF-WAY			SURFACE RESTORATION AND BACKFILL
	PROPOSED SANITARY SEWER			

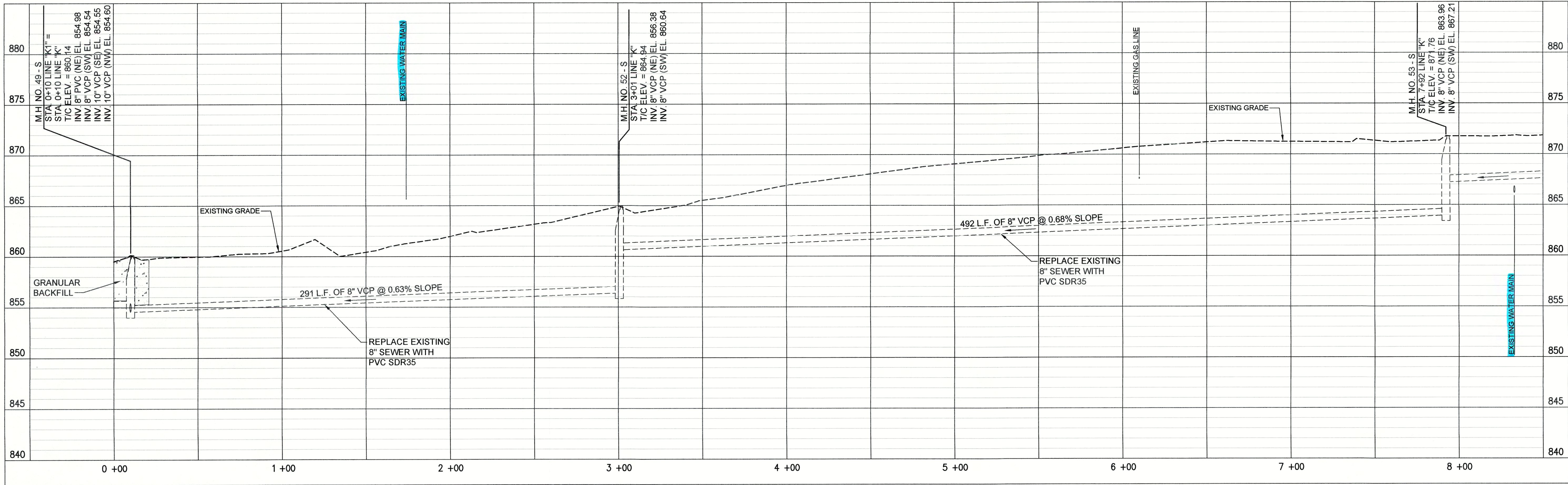




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PRINTED: 3/11/2017 @ 3:05PM



PLAN VIEW - STA. 0+00 TO STA. 8+50 LINE "K"



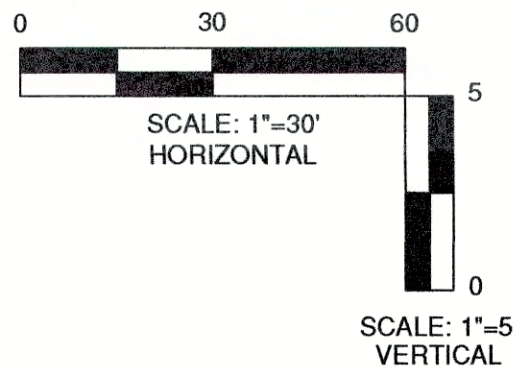
PROFILE - STA. 0+00 TO STA. 8+50 LINE "K"

(A) PIPE SEGMENT TO BE ABANDONED

- NOTES:
- LETTERS SHOWN NEXT TO MANHOLE NUMBERS IN THE PROFILE CORRESPOND TO REHABILITATION SCHEDULE ON SHEET C-42.
  - SEE SHEETS C-01 THROUGH C-15 FOR NOTES ON LATERAL REHABILITATION WORK.

PROPOSED LEGEND

- |   |                             |   |                                  |
|---|-----------------------------|---|----------------------------------|
| — | PROPOSED PERMANENT EASEMENT | — | PROPOSED SANITARY LATERAL        |
| — | PROPOSED RIGHT-OF-WAY       | — | SURFACE RESTORATION AND BACKFILL |
| — | PROPOSED SANITARY SEWER     | — |                                  |

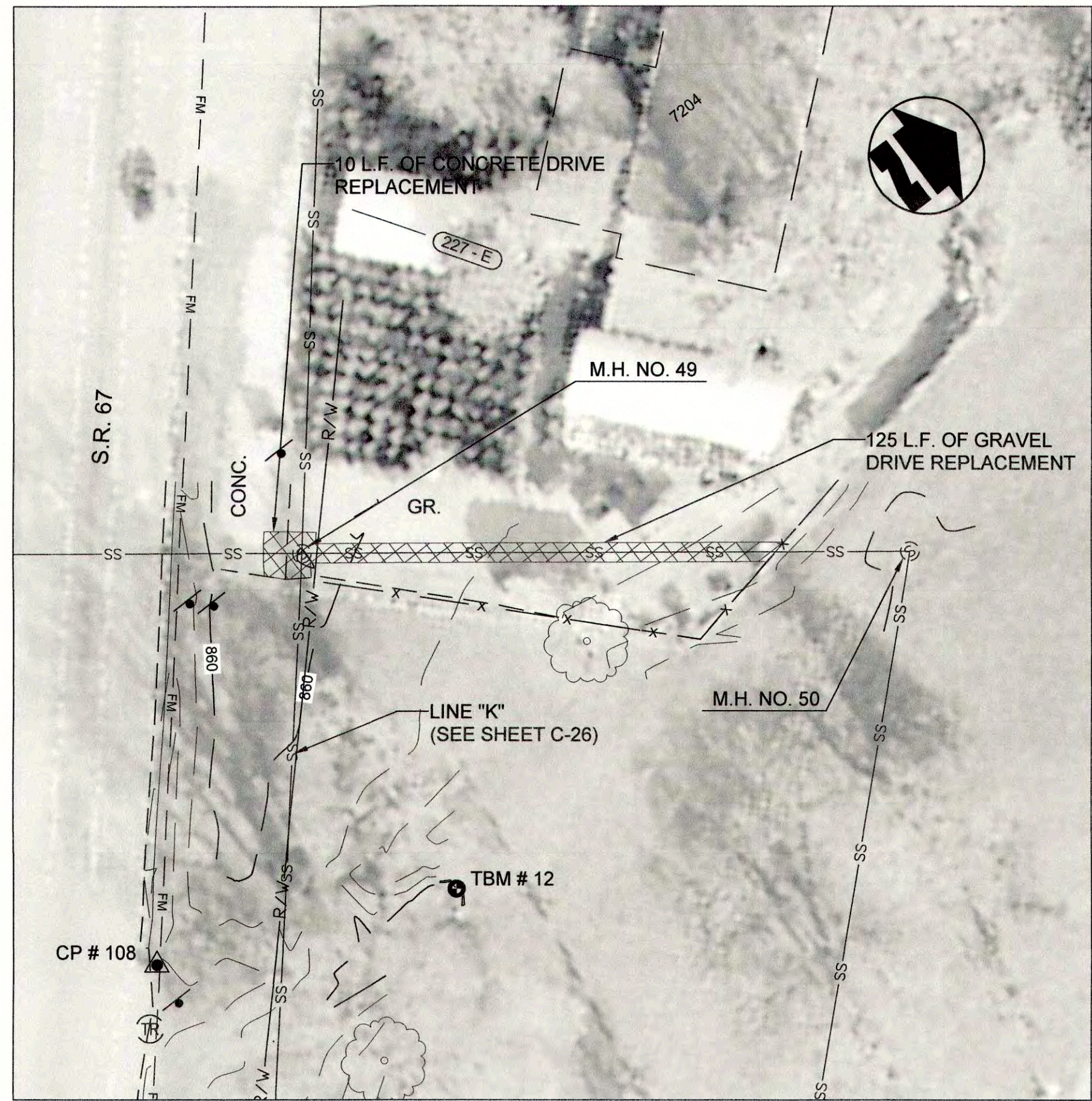


<p>JOSEPH P. TIERNEY REGISTERED No. 19300407 STATE OF INDIANA PROFESSIONAL ENGINEER</p>	
<p>GRW PROJECT NO. 4447-24 SRF NO. WW18074803 --</p>	<p>ALL RIGHTS RESERVED THIS DOCUMENT IS THE PROPERTY OF GEO SPOONER &amp; ASSOCIATES, INC. IT IS TO BE USED FOR THE PROJECT FOR WHICH IT WAS PREPARED AND NOT BE REPRODUCED IN ANY MANNER WITHOUT WRITTEN PERMISSION</p>
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<p>PLAN AND PROFILE LINE "K" SEWER REHABILITATION PROJECT PHASE II TOWN OF PENDLETON, INDIANA</p>	
<p>DESIGNED BY DATE</p>	<p>GWL GWL GWL JPT</p>
<p>REVISIONS NO. DESCRIPTION 1. THIS MARK SHOULD MEASURE EXACTLY 1" WHEN PLOTTED</p>	
<p>DATE: MARCH 2017 SCALE: H.-1"=30', V.-1"=5' SHEET NO. C-26</p>	

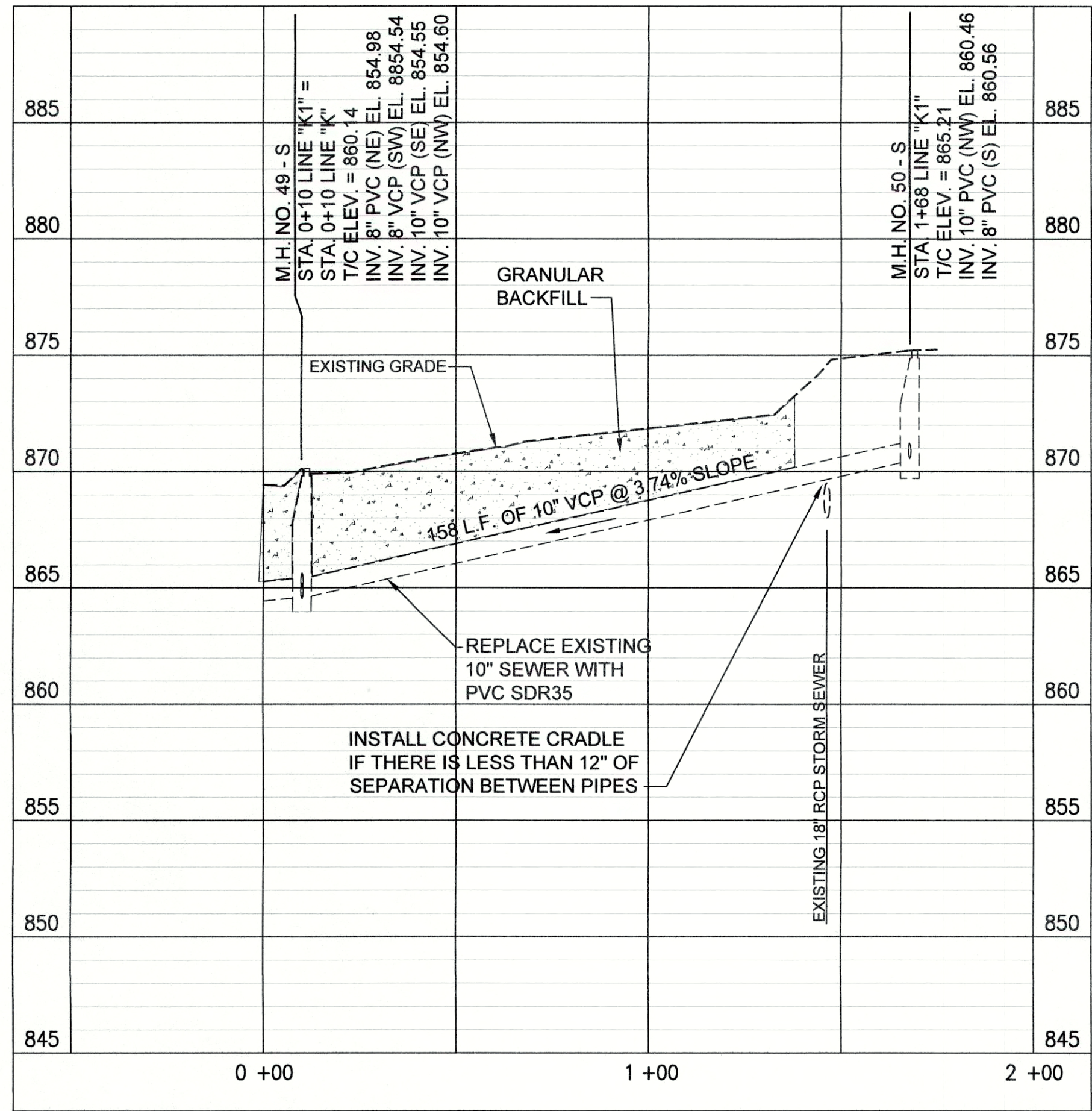




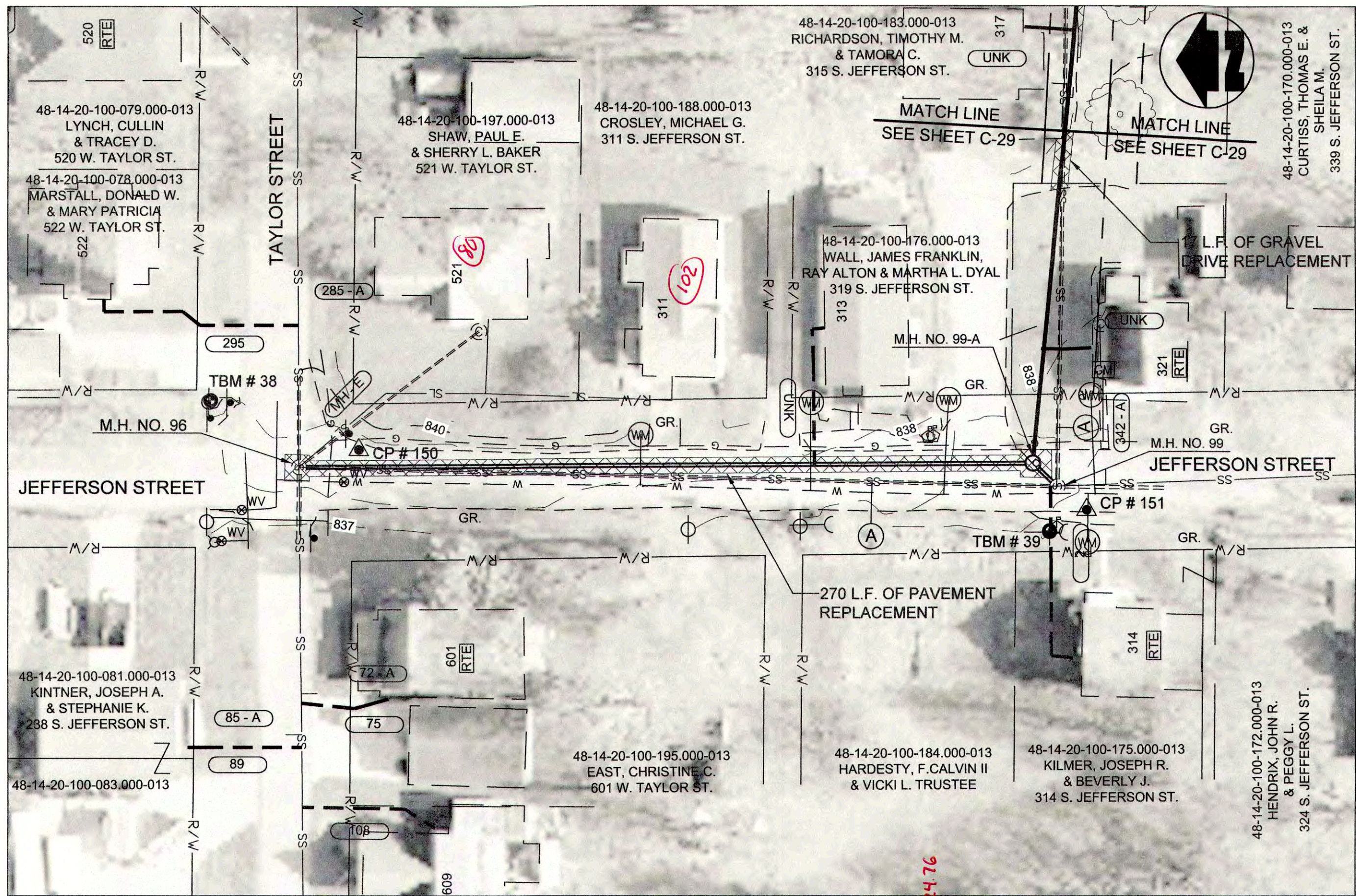




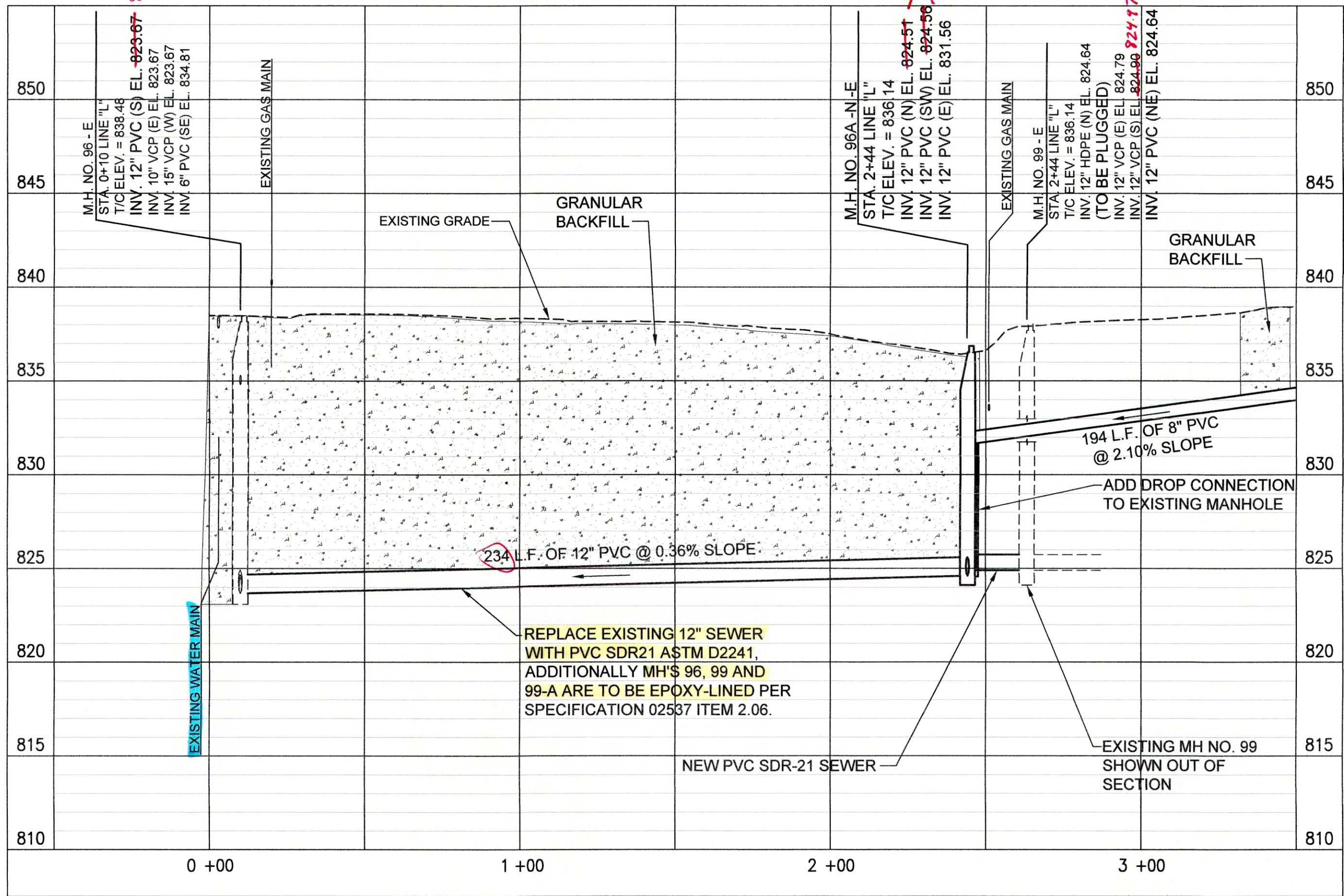
PLAN VIEW - STA. 0+00 TO STA. 1+75 LINE "K1"



PROFILE - STA. 0+00 TO STA. 1+75 LINE "K1"



PLAN VIEW - STA. 0+00 TO STA. 3+50 LINE "L"



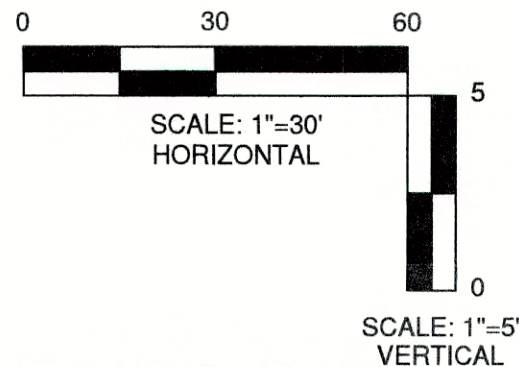
PROFILE - STA. 0+00 TO STA. 3+50 LINE "L"

PROPOSED LEGEND

- PROPOSED PERMANENT EASEMENT
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- PROPOSED SANITARY SEWER
- PROPOSED SANITARY LATERAL
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(A) PIPE SEGMENT TO BE ABANDONED

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JOSEPH P. TIERNY  
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No. 19300407  
STATE OF INDIANA  
PROFESSIONAL ENGINEER

GRW PROJECT NO. 4447-24  
SRF NO. WVI6074803 --

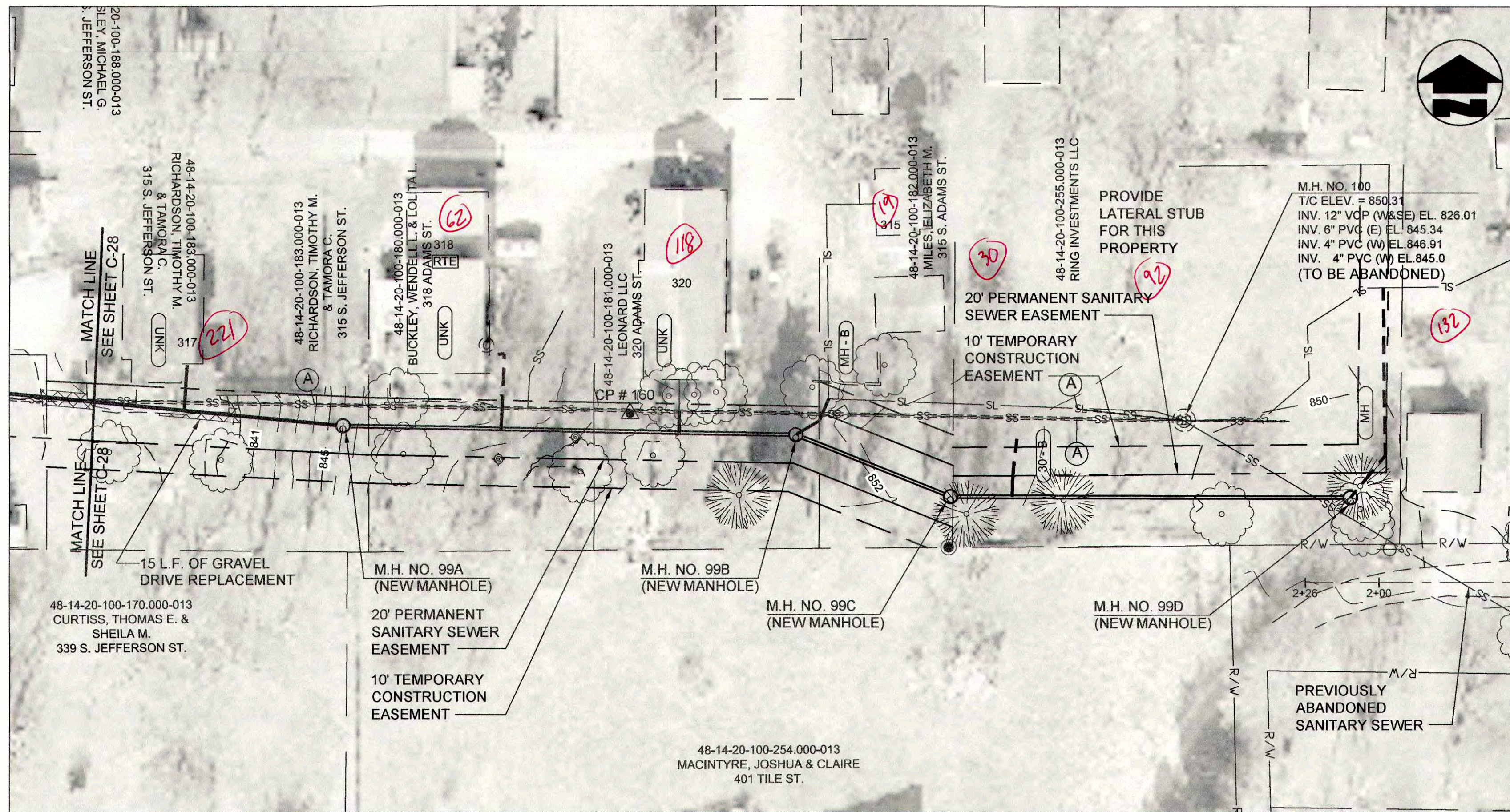
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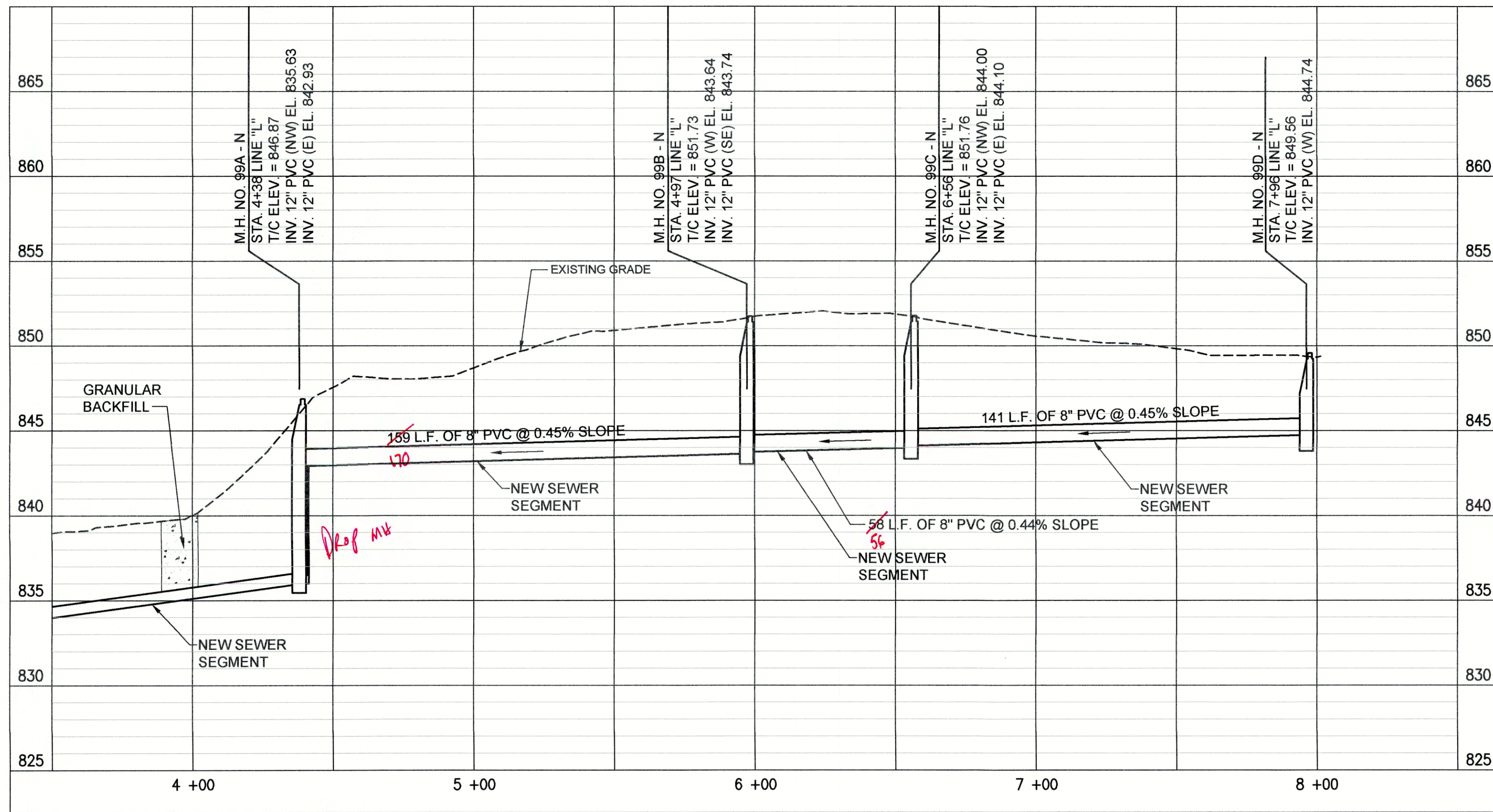
PLAN AND PROFILE  
LINE "K1" AND LINE "L"  
SEWER REHABILITATION PROJECT PHASE II  
TOWN OF PENDLETON, INDIANA

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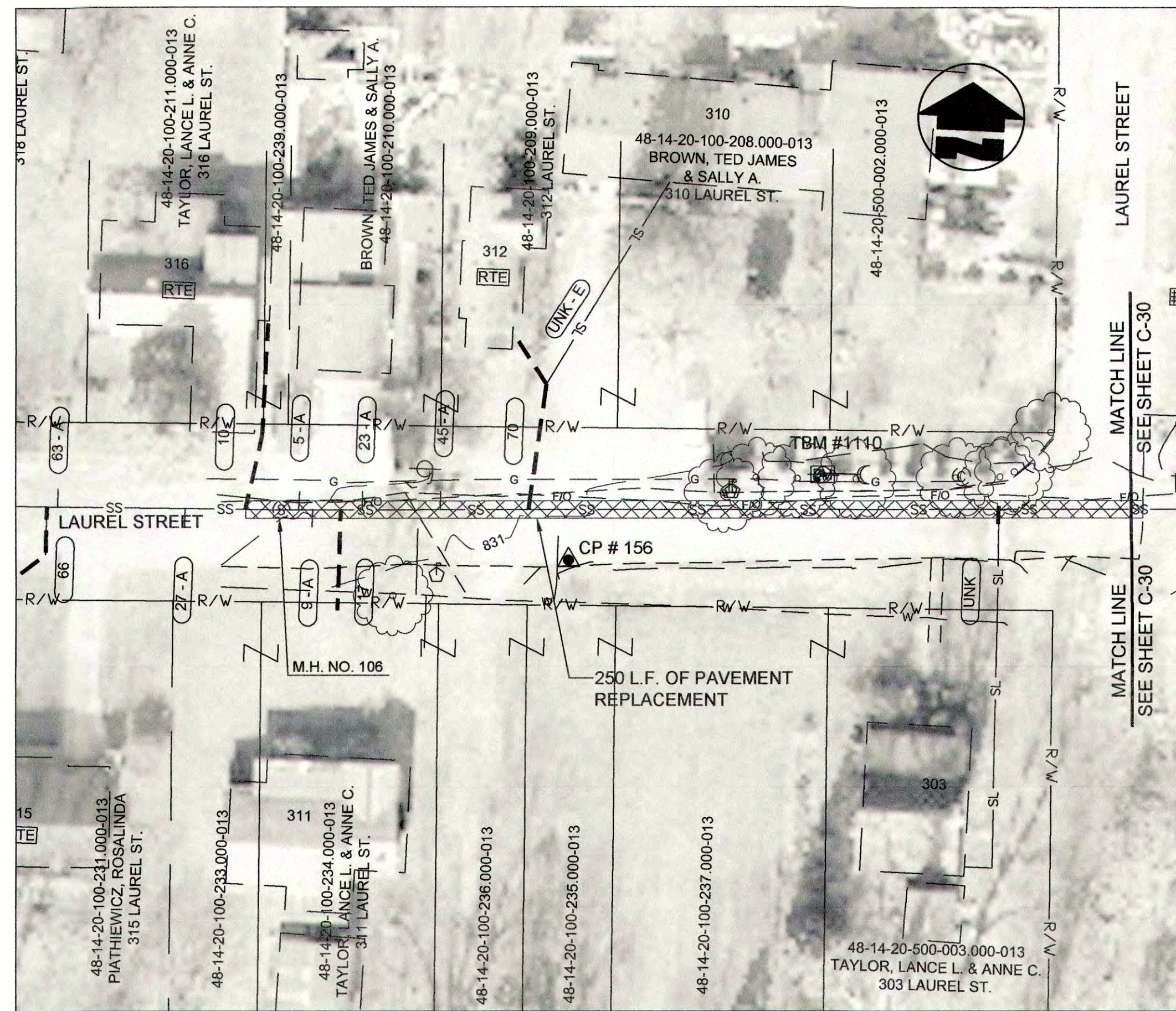




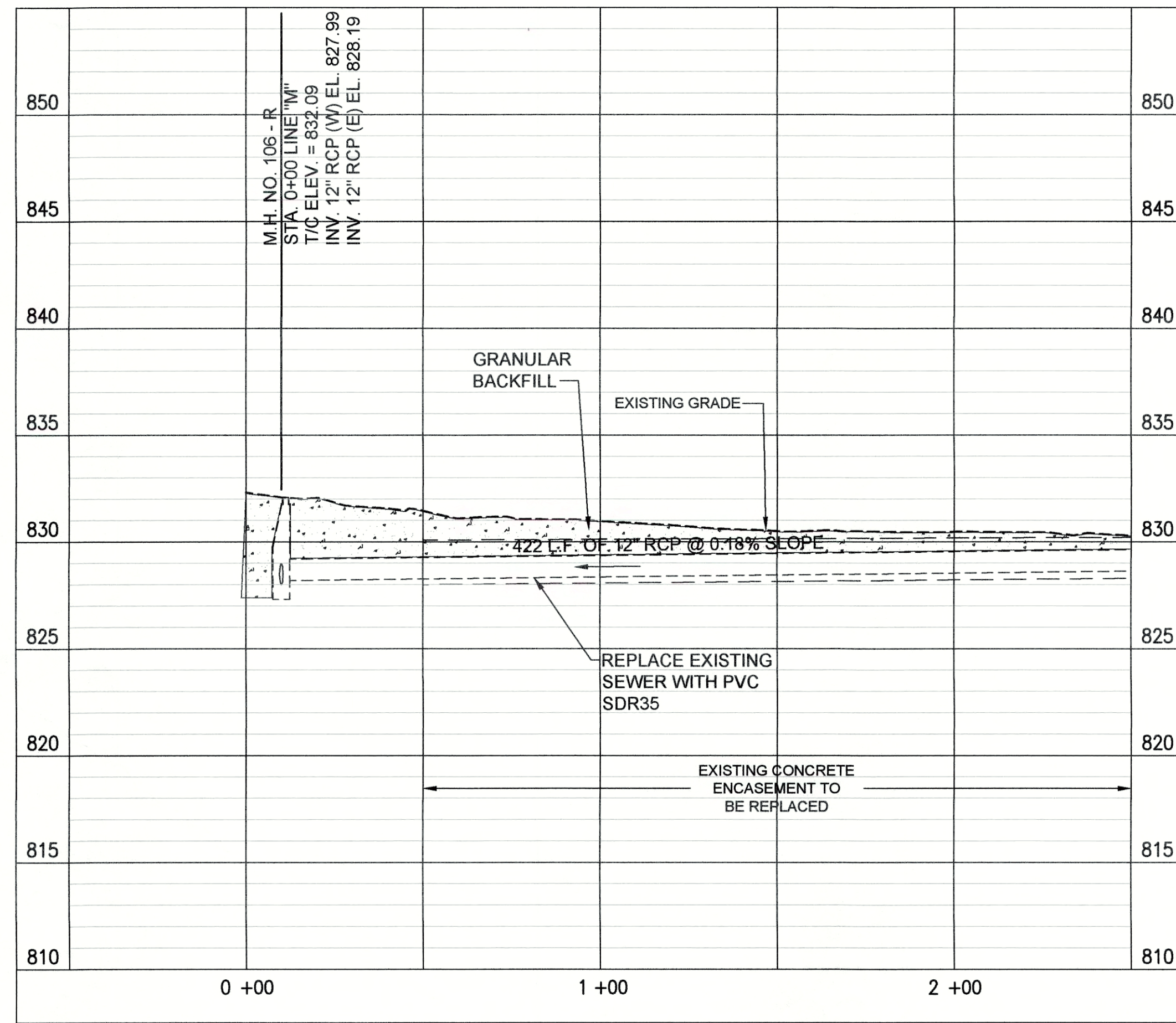
PLAN VIEW - STA. 3+50 TO STA. 8+01 LINE "L"



PROFILE - STA. 3+50 TO STA. 8+01 LINE "L"



PLAN VIEW - STA. 0+00 TO STA. 2+50 LINE "M"



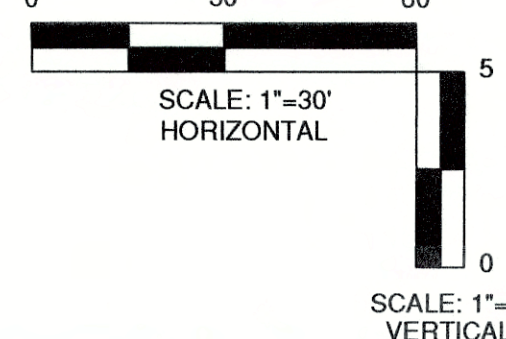
PROFILE - STA. 0+00 TO STA. 2+50 LINE "M"

(A) PIPE SEGMENT TO BE ABANDONED

- NOTES:
- LETTERS SHOWN NEXT TO MANHOLE NUMBERS IN THE PROFILE CORRESPOND TO REHABILITATION SCHEDULE ON SHEET C-42.
  - SEE SHEETS C-01 THROUGH C-15 FOR NOTES ON LATERAL REHABILITATION WORK.

PROPOSED LEGEND

	PROPOSED PERMANENT EASEMENT		PROPOSED SANITARY LATERAL
	PROPOSED RIGHT-OF-WAY		SURFACE RESTORATION AND BACKFILL
	PROPOSED SANITARY SEWER		



JOSEPH P. TIERNEY  
REGISTERED  
No. 19300407  
STATE OF INDIANA  
PROFESSIONAL ENGINEER

GRW PROJECT NO. 4447-24  
SRF NO. W16074803 --

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C-29

PLAN AND PROFILE  
LINE "L" AND LINE "M"  
SEWER REHABILITATION PROJECT PHASE II  
TOWN OF PENDLETON, INDIANA

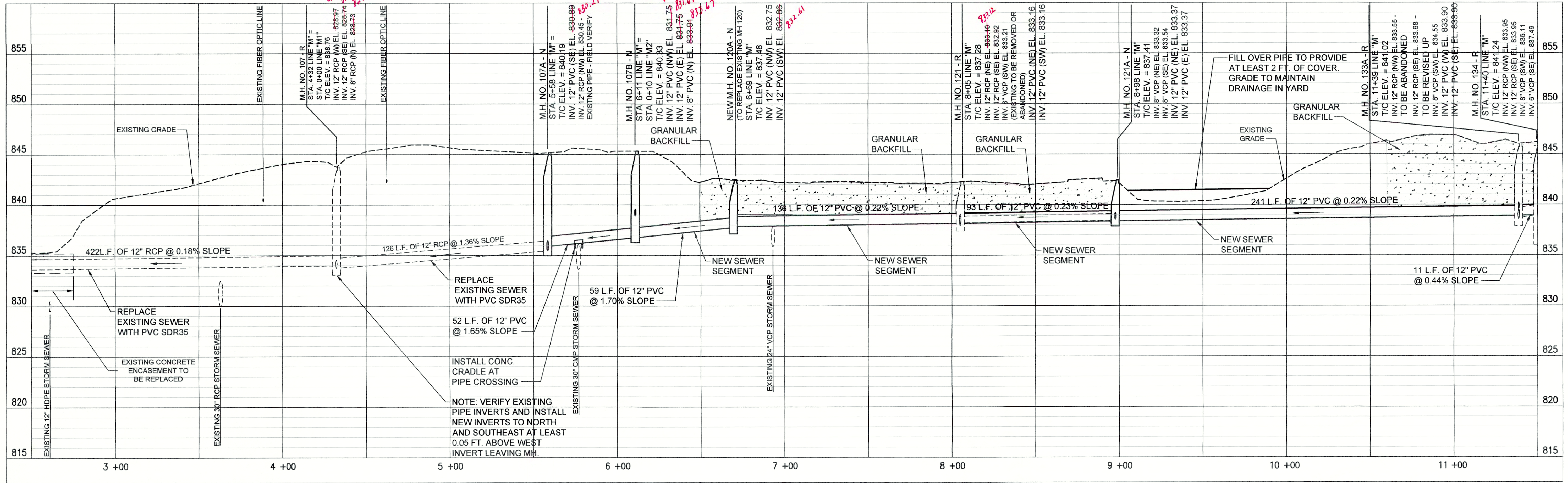
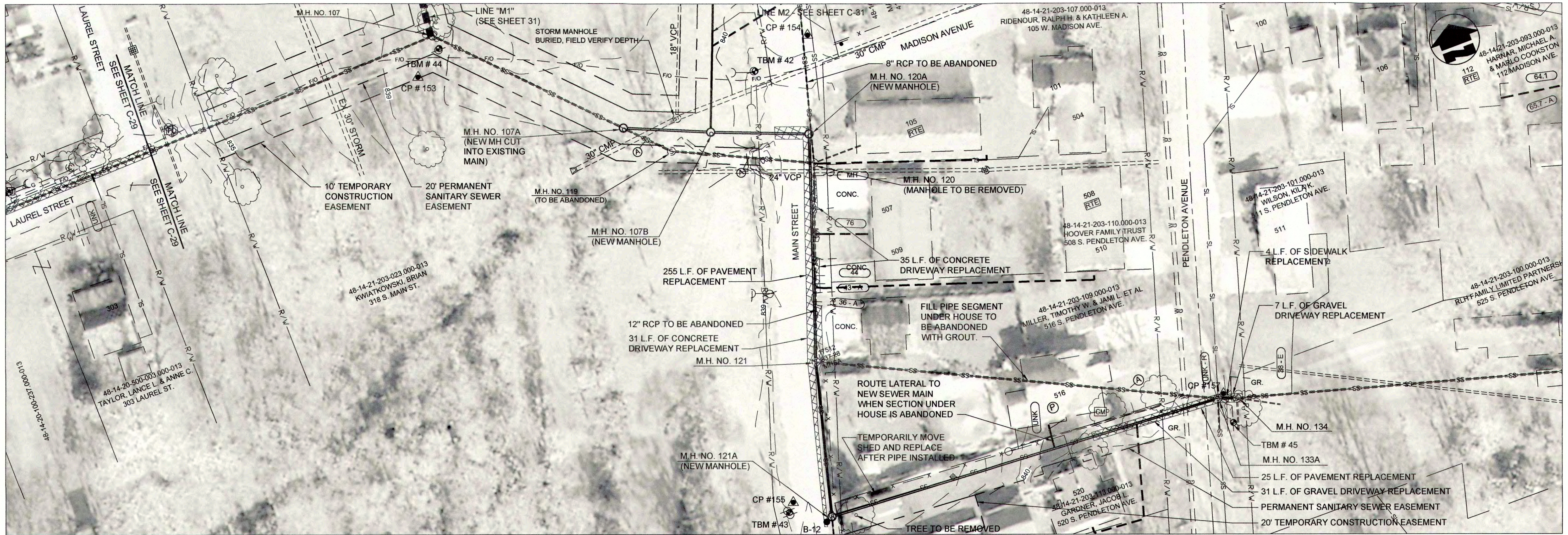
DESIGNED	GWL	BY	DATE
DRAWN	GCR	DATE	
REVIEWED	GWL	DATE	
APPROVED	JPT	DATE	

REVISIONS  
NO. DESCRIPTION  
1. THIS MARK SHOULD MEASURE EXACTLY TO WHEN NOTED

DATE: MARCH 2017  
SCALE: H.-1"=30', V.-1"=5'  
SHEET NO.

C-29





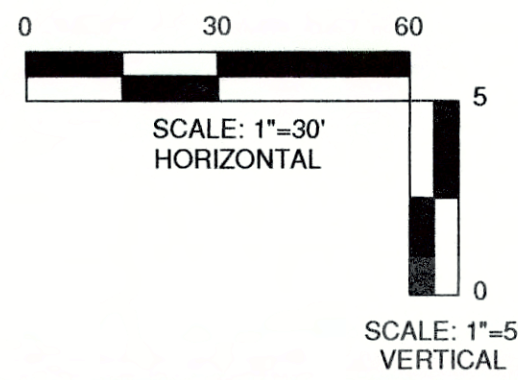
(A) PIPE SEGMENT TO BE ABANDONED

- NOTES:
- LETTERS SHOWN NEXT TO MANHOLE NUMBERS IN THE PROFILE CORRESPOND TO REHABILITATION SCHEDULE ON SHEET C-42.
  - SEE SHEETS C-01 THROUGH C-15 FOR NOTES ON LATERAL REHABILITATION WORK.

PROPOSED LEGEND

- PROPOSED PERMANENT EASEMENT
- PROPOSED RIGHT-OF-WAY
- PROPOSED SANITARY SEWER
- PROPOSED SANITARY LATERAL
- SURFACE RESTORATION AND BACKFILL

PROFILE - STA. 2+50 TO STA. 11+50 LINE "M"



GRW PROJECT NO. 4447-24  
SPE NO. WW16074803 -

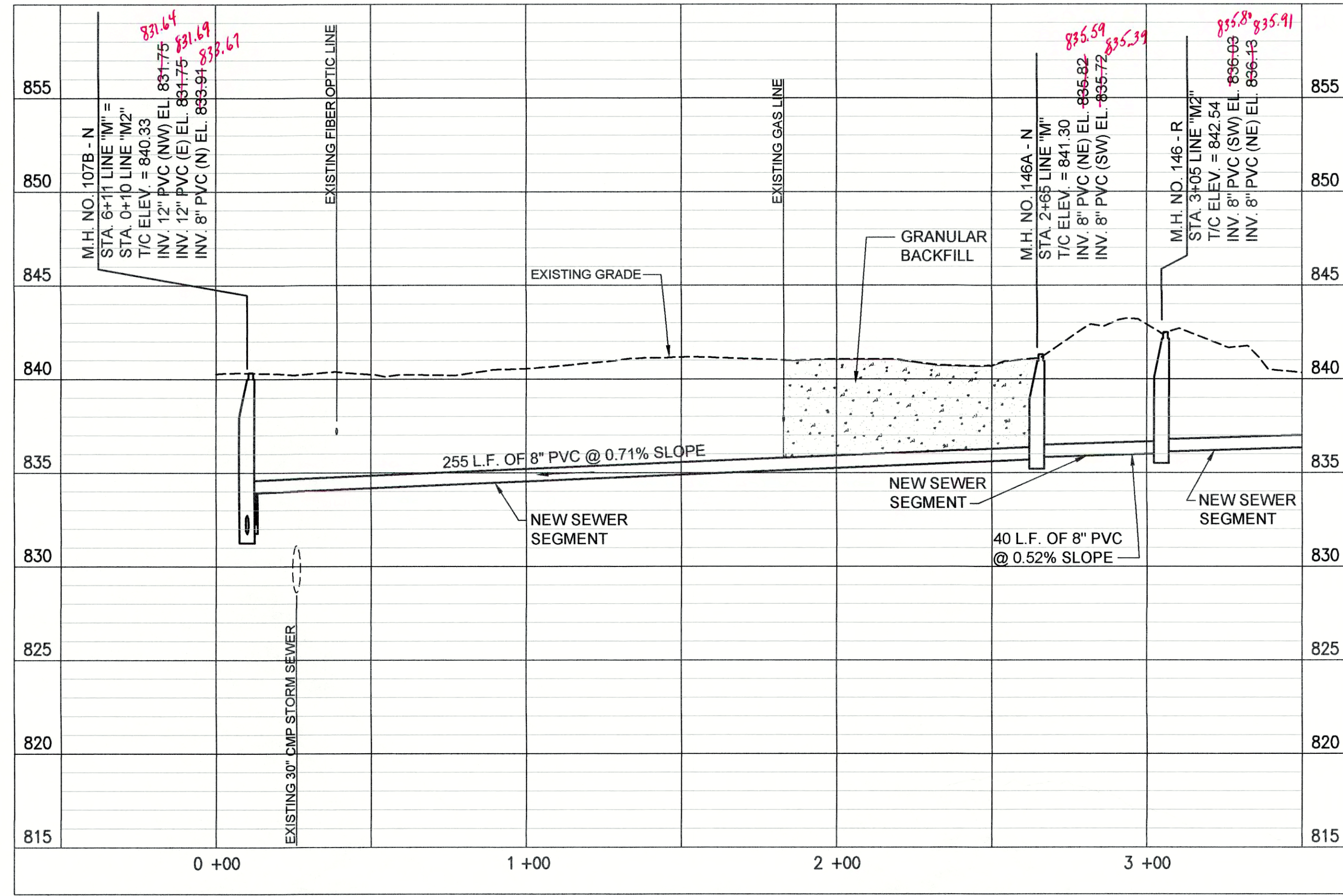
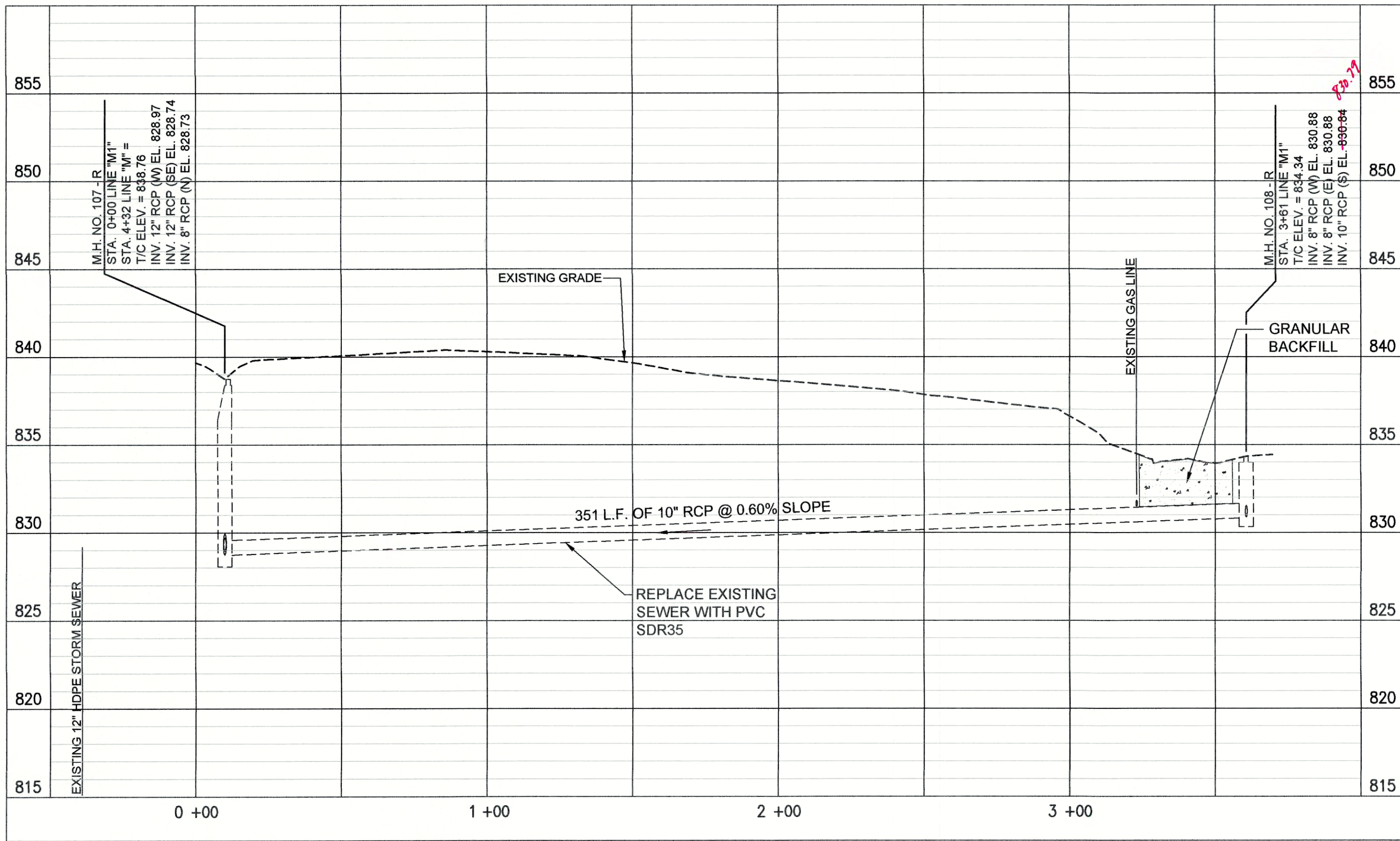
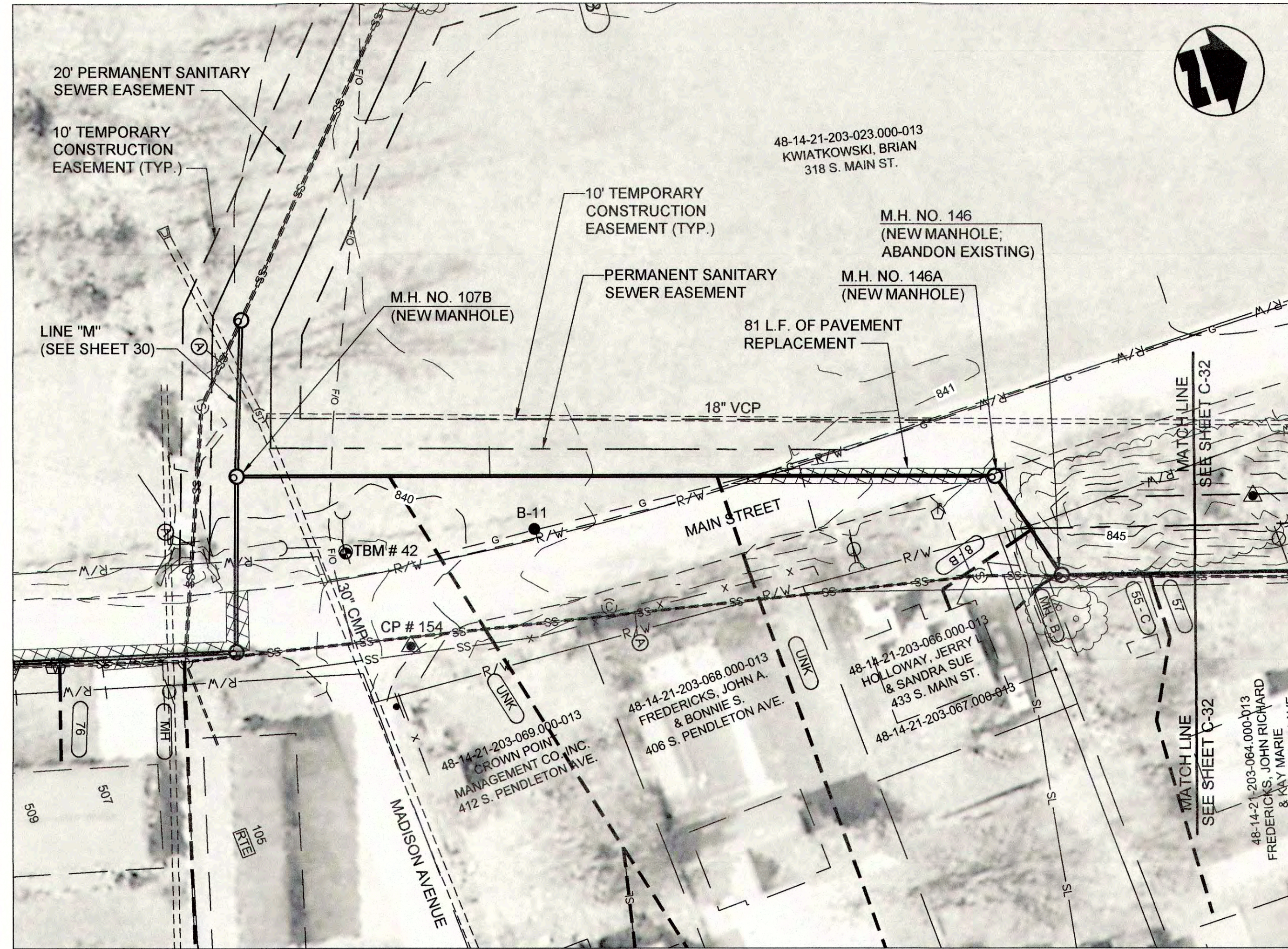
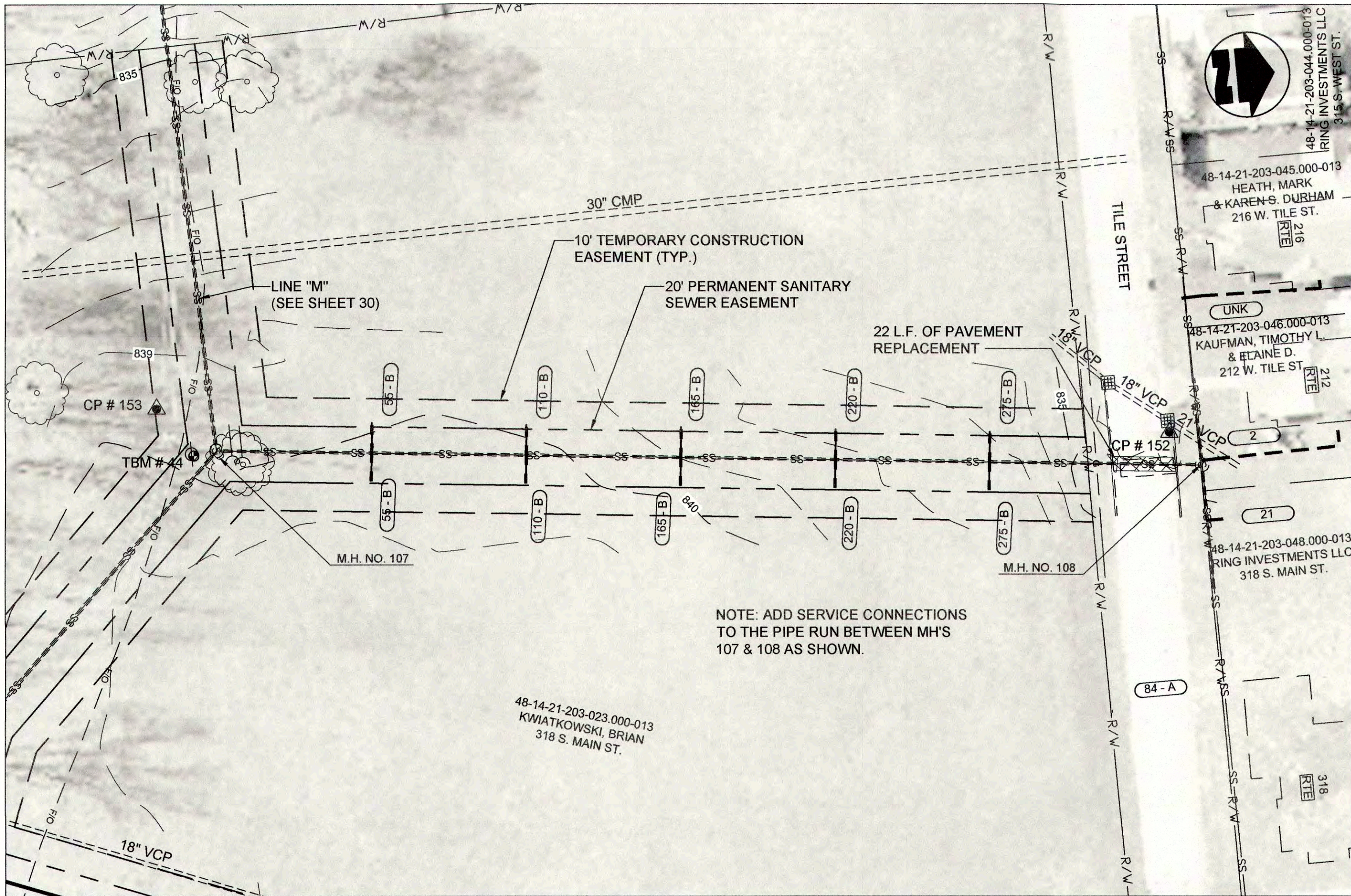
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PLAN AND PROFILE  
LINE "M"  
SEWER REHABILITATION PROJECT PHASE II  
TOWN OF PENDLETON, INDIANA

DESIGNED	GWL	GOR	GWL	JPT
DATE	BY	DATE	BY	DATE
REVISIONS	DESCRIPTION	REVISIONS	DESCRIPTION	REVISIONS
NO.	DATE	NO.	DATE	NO.

DATE: MARCH 2017  
SCALE: H.-1"=30', V.-1"=5'  
SHEET NO. C-30



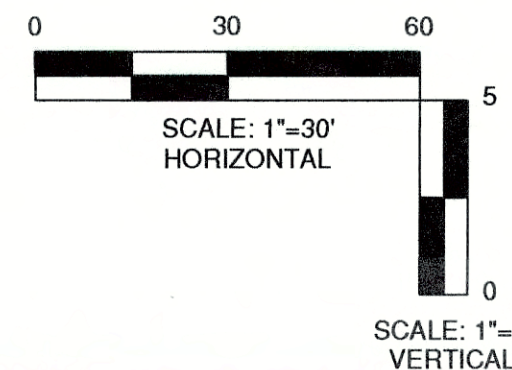


(A) PIPE SEGMENT TO BE ABANDONED

- NOTES:
- LETTERS SHOWN NEXT TO MANHOLE NUMBERS IN THE PROFILE CORRESPOND TO REHABILITATION SCHEDULE ON SHEET C-42.
  - SEE SHEETS C-01 THROUGH C-15 FOR NOTES ON LATERAL REHABILITATION WORK.

PROPOSED LEGEND

- PROPOSED PERMANENT EASEMENT
- PROPOSED RIGHT-OF-WAY
- PROPOSED SANITARY SEWER
- PROPOSED SANITARY LATERAL
- SURFACE RESTORATION AND BACKFILL



JOSEPH P. TIERNEY  
REGISTERED  
No. 19300407  
STATE OF INDIANA  
Professional Engineer

GRW PROJECT NO. 4447-24  
SRF NO. W16074803 --

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PLAN AND PROFILE  
LINE "M1" AND LINE "M2"  
SEWER REHABILITATION PROJECT PHASE II  
TOWN OF PENDLETON, INDIANA

DESIGNED	GWL	BY	DATE

REVISIONS	DESCRIPTION	DATE	BY

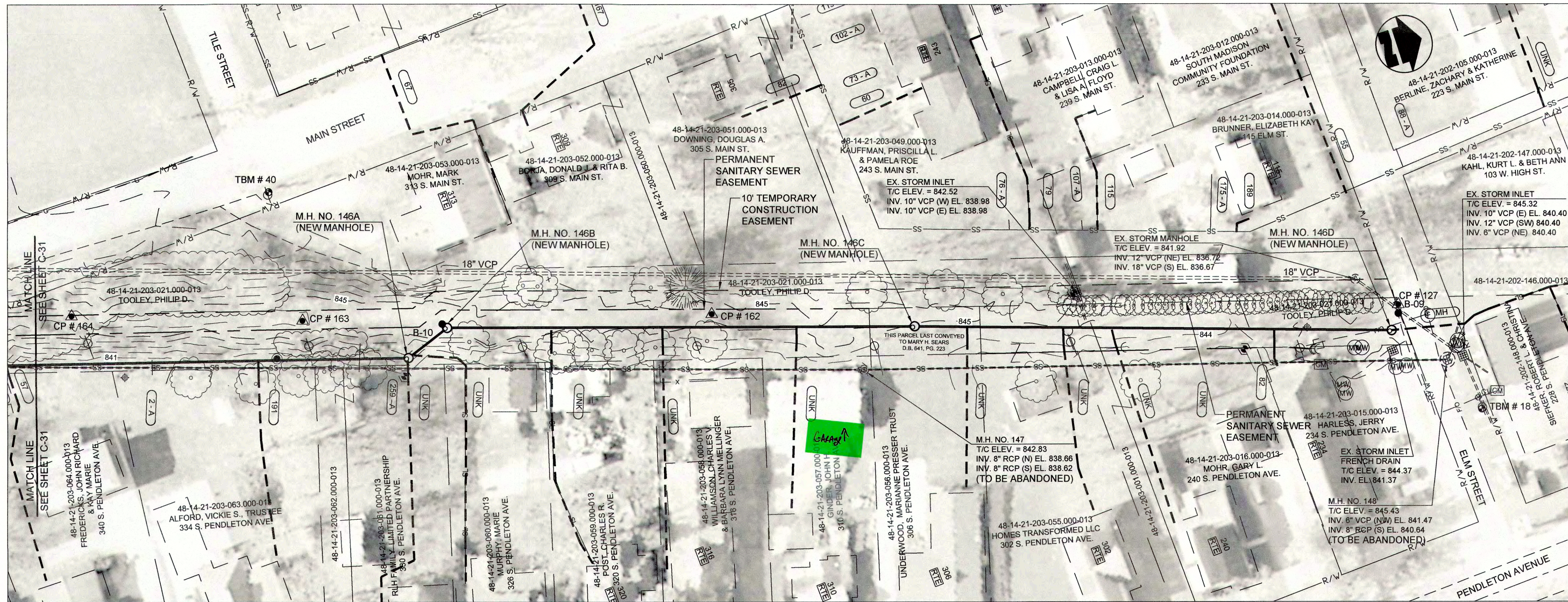
DESIGNED	GWL	BY	DATE

REVISIONS	DESCRIPTION	DATE	BY

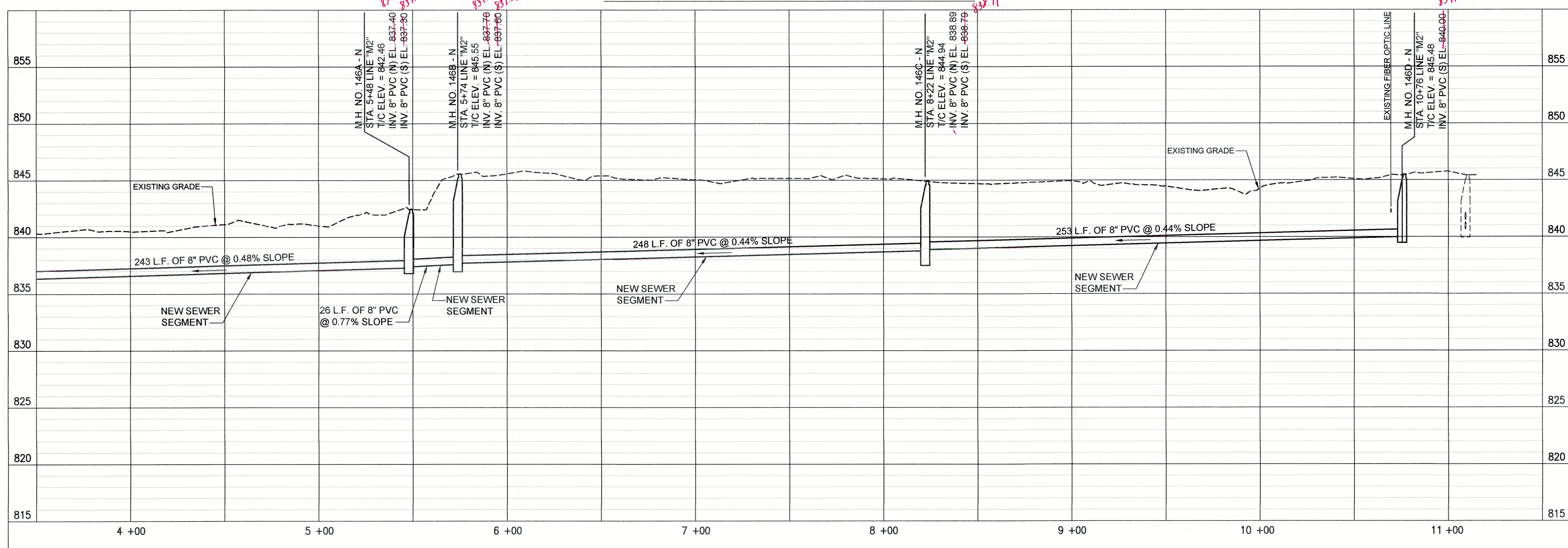
SCALE CHECK: THIS MARK SHOULD MEASURE EXACTLY 1" WHEN PLOTTED

DATE: MARCH 2017  
SCALE: H.-1"=30', V.-1"=5'  
SHEET NO. C-31





PLAN VIEW - STA. 3+50 TO STA. 11+15 LINE "M2"

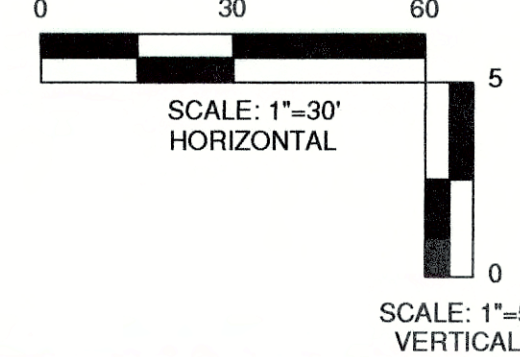


PROPOSED LEGEND PROFILE - STA. 3+50 TO STA. 11+15 LINE "M2"

- |   |                             |   |                                  |
|---|-----------------------------|---|----------------------------------|
| — | PROPOSED PERMANENT EASEMENT | — | PROPOSED SANITARY LATERAL        |
| — | PROPOSED RIGHT-OF-WAY       | — | SURFACE RESTORATION AND BACKFILL |
| — | PROPOSED SANITARY SEWER     |   |                                  |

(A) PIPE SEGMENT TO BE ABANDONED

- NOTES:
- LETTERS SHOWN NEXT TO MANHOLE NUMBERS IN THE PROFILE CORRESPOND TO REHABILITATION SCHEDULE ON SHEET C-42.
  - SEE SHEETS C-01 THROUGH C-15 FOR NOTES ON LATERAL REHABILITATION WORK.



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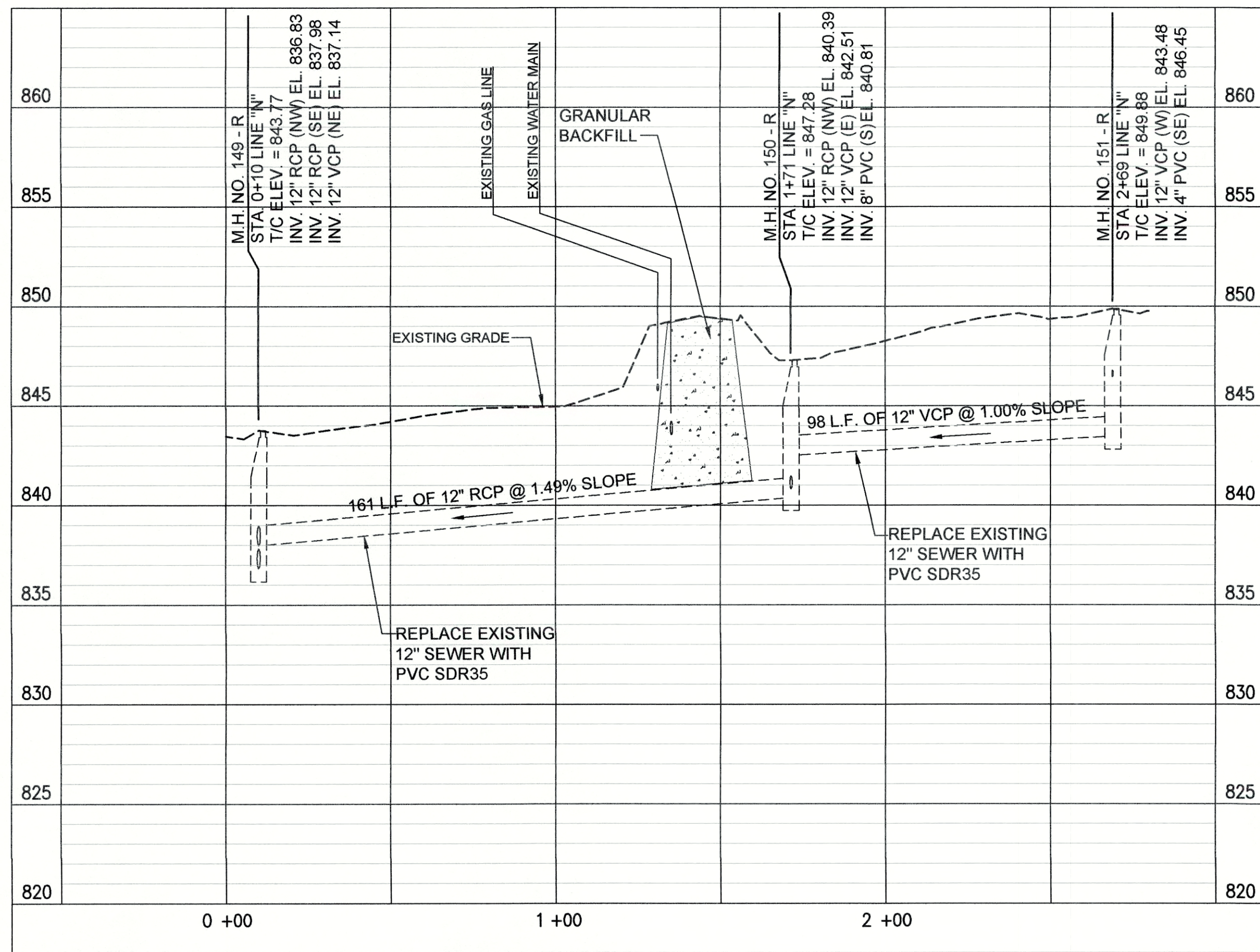
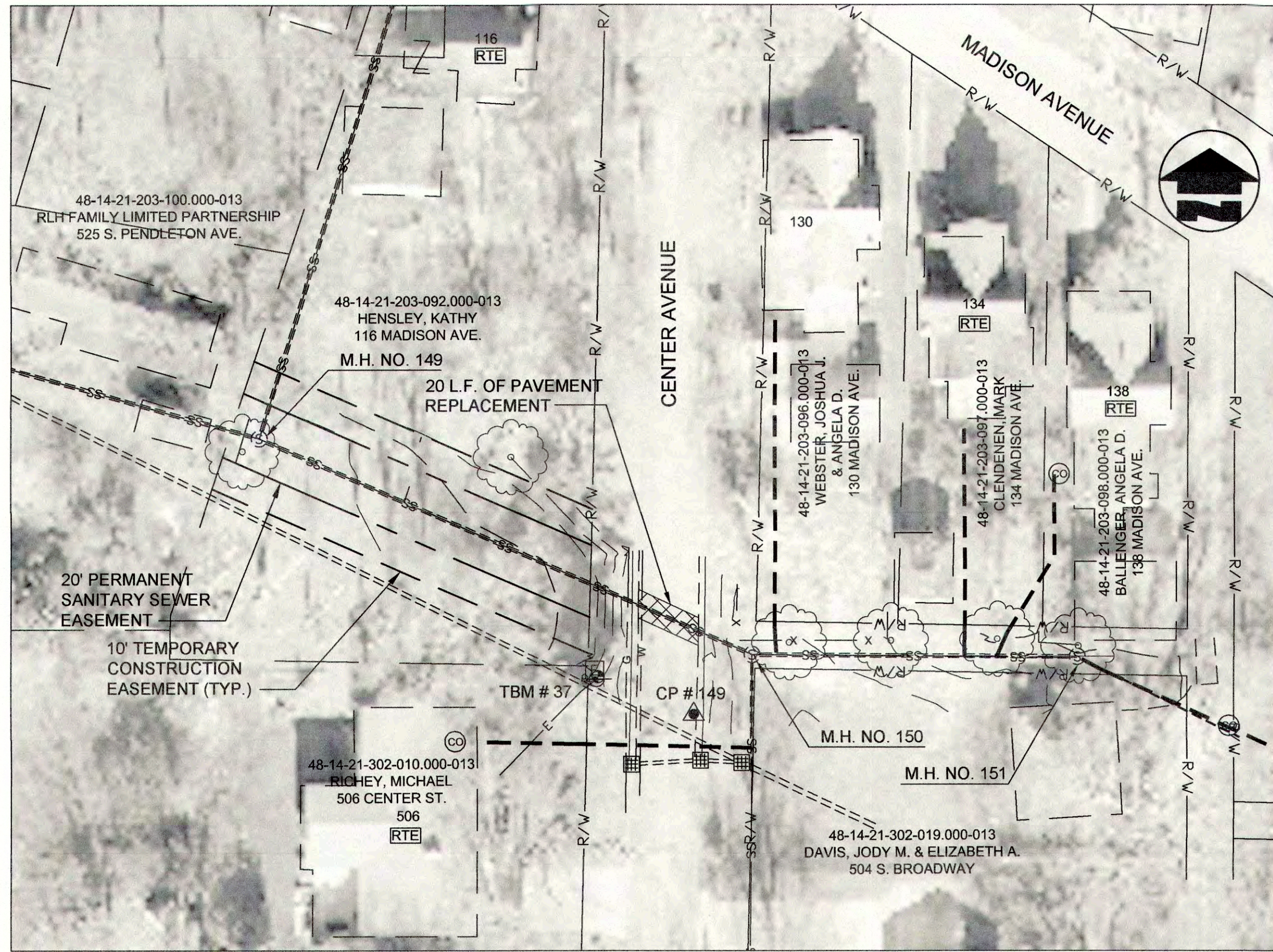


PLAN AND PROFILE  
LINE "M2"  
SEWER REHABILITATION PROJECT PHASE II  
TOWN OF PENDLETON, INDIANA

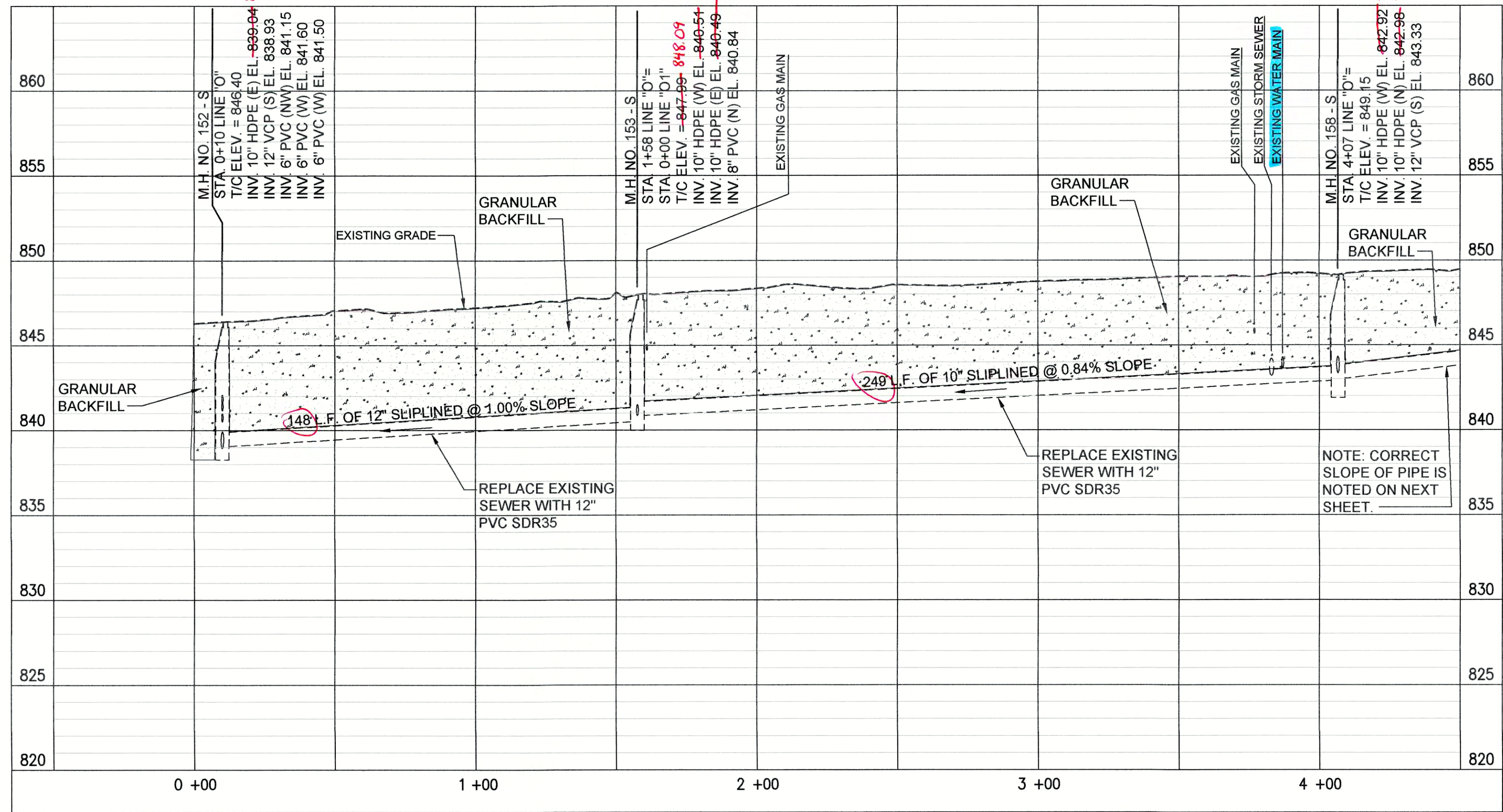
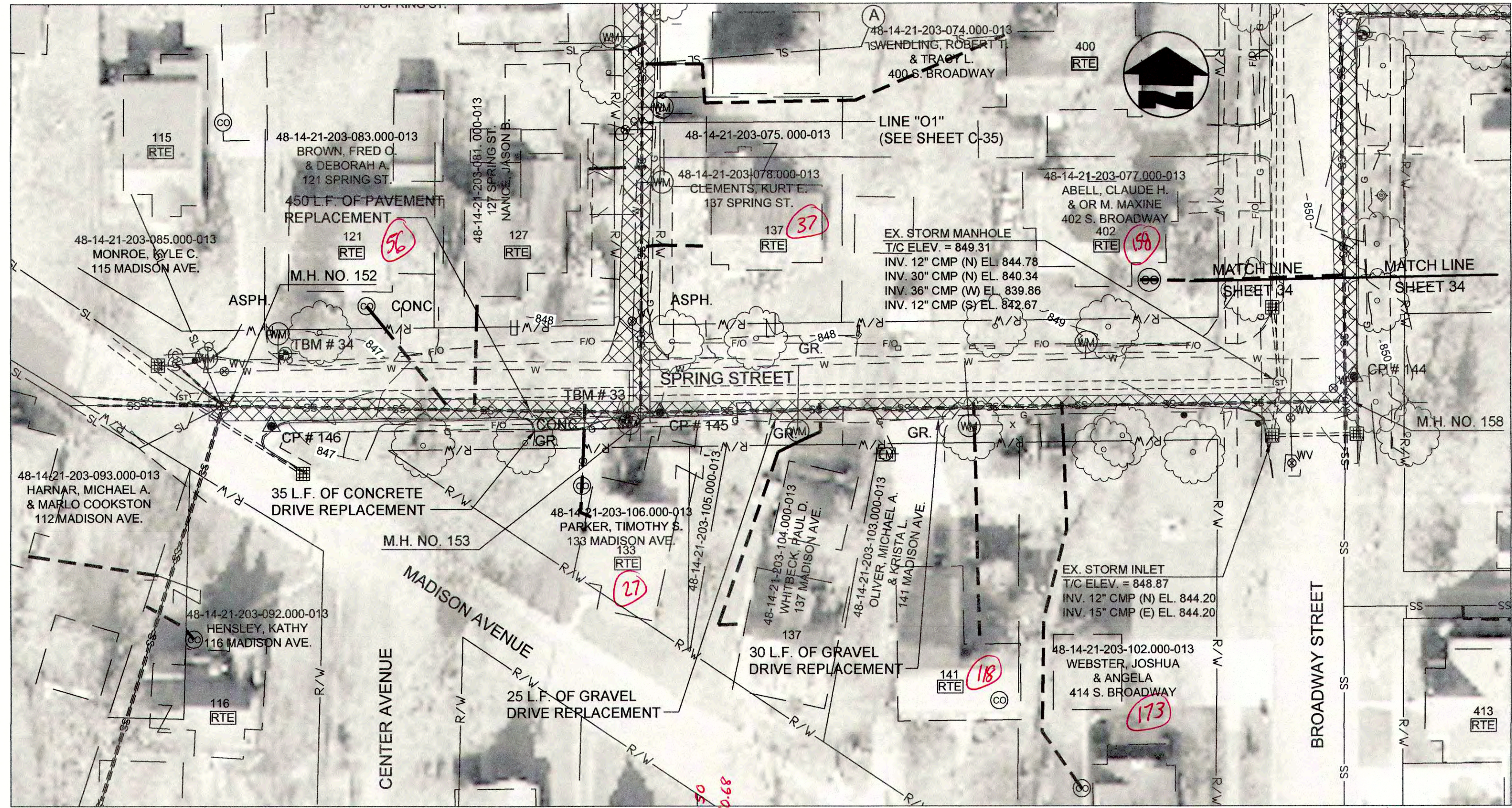
REVISED	NO.	DATE	BY	DESCRIPTION	DESIGNED	GWL	GCR	GWL	JPT

DATE: MARCH 2017  
SCALE: H.-1"=30', V.-1"=5'  
SHEET NO. C-32





PROFILE - STA. 0+00 TO STA. 2+80 LINE "N"



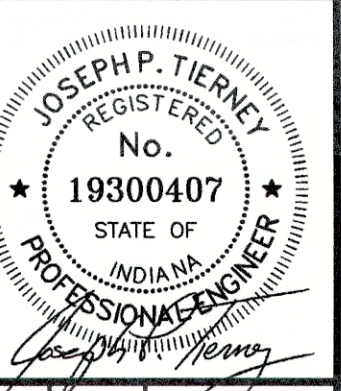
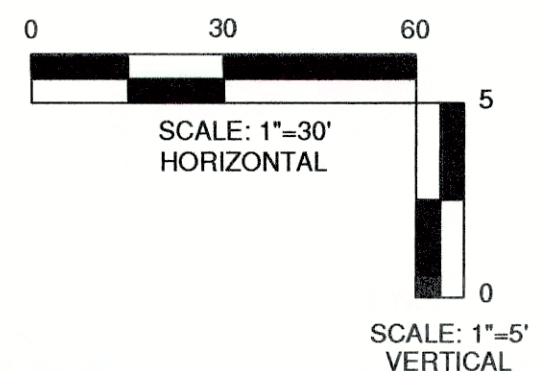
PROFILE - STA. 0+00 TO STA. 4+50 LINE "O"

(A) PIPE SEGMENT TO BE ABANDONED

- NOTES:
- LETTERS SHOWN NEXT TO MANHOLE NUMBERS IN THE PROFILE CORRESPOND TO REHABILITATION SCHEDULE ON SHEET C-42.
  - SEE SHEETS C-01 THROUGH C-15 FOR NOTES ON LATERAL REHABILITATION WORK.

PROPOSED LEGEND

- |   |                             |   |                                  |
|---|-----------------------------|---|----------------------------------|
| — | PROPOSED PERMANENT EASEMENT | — | PROPOSED SANITARY LATERAL        |
| — | PROPOSED RIGHT-OF-WAY       | — | SURFACE RESTORATION AND BACKFILL |
| — | PROPOSED SANITARY SEWER     | — |                                  |



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PLAN AND PROFILE  
LINE "N" AND LINE "O"  
SEWER REHABILITATION PROJECT PHASE II  
TOWN OF PENDLETON, INDIANA

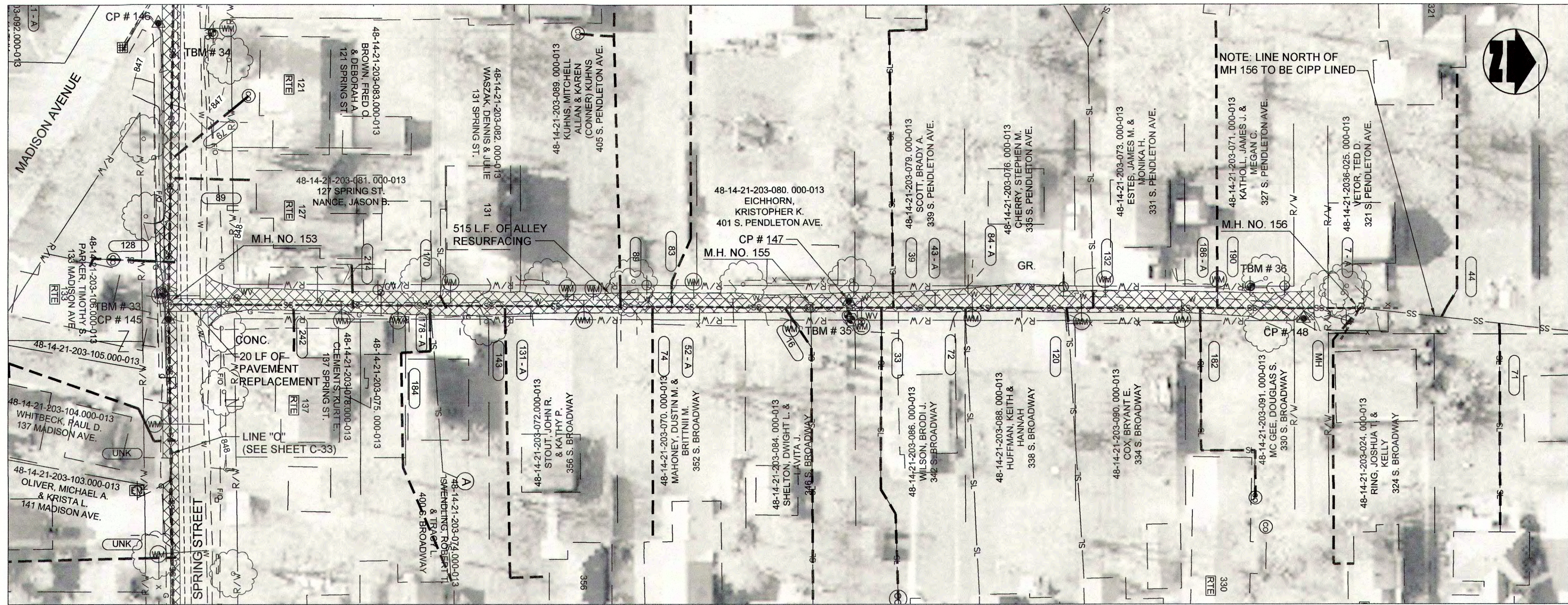
REVISIONS	NO.	DATE	BY	DESCRIPTION	DESIGNED	GWL	GWR	GWL	JPT

DATE: MARCH 2017  
SCALE: H.-1"=30', V.-1"=5'  
SHEET NO. C-33

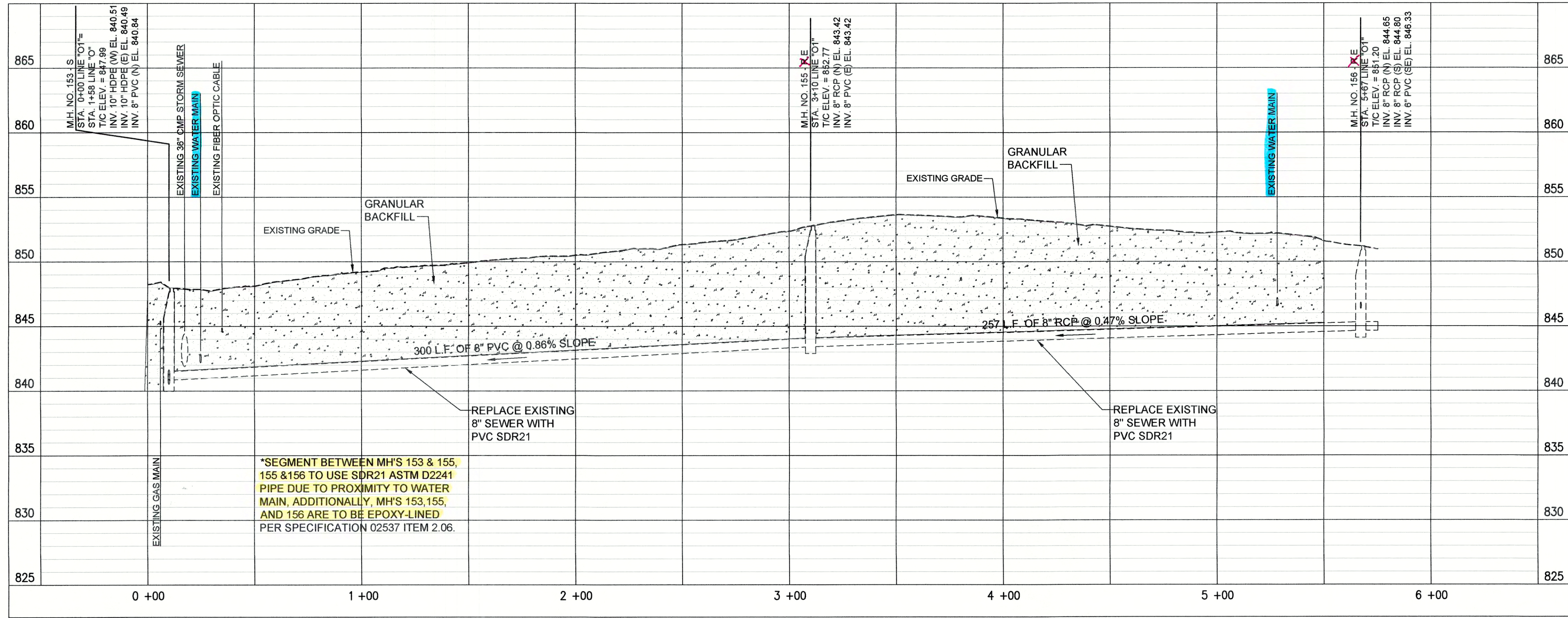








PLAN VIEW - STA. 0+00 TO STA. 5+75 LINE "O1" CIPP LINED PER BID ALTERNATE



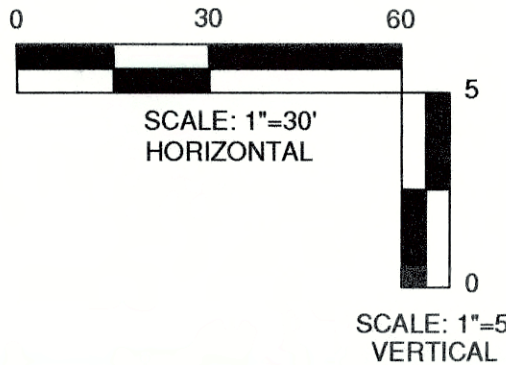
PROFILE - STA. 0+00 TO STA. 5+75 LINE "O1"

PROPOSED LEGEND

- PROPOSED PERMANENT EASEMENT
- PROPOSED RIGHT-OF-WAY
- PROPOSED SANITARY SEWER
- PROPOSED SANITARY LATERAL
- SURFACE RESTORATION AND BACKFILL

(A) PIPE SEGMENT TO BE ABANDONED

- NOTES:
- LETTERS SHOWN NEXT TO MANHOLE NUMBERS IN THE PROFILE CORRESPOND TO REHABILITATION SCHEDULE ON SHEET C-42.
  - SEE SHEETS C-01 THROUGH C-15 FOR NOTES ON LATERAL REHABILITATION WORK.



JOSEPH P. TIERNEY  
REGISTERED  
No. 19300407  
STATE OF INDIANA  
Professional Engineer

GRW PROJECT NO. 4447-24  
SRF NO. WW18074803 --

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PLAN AND PROFILE  
LINE "O1"  
SEWER REHABILITATION PROJECT PHASE II  
TOWN OF PENDLETON, INDIANA

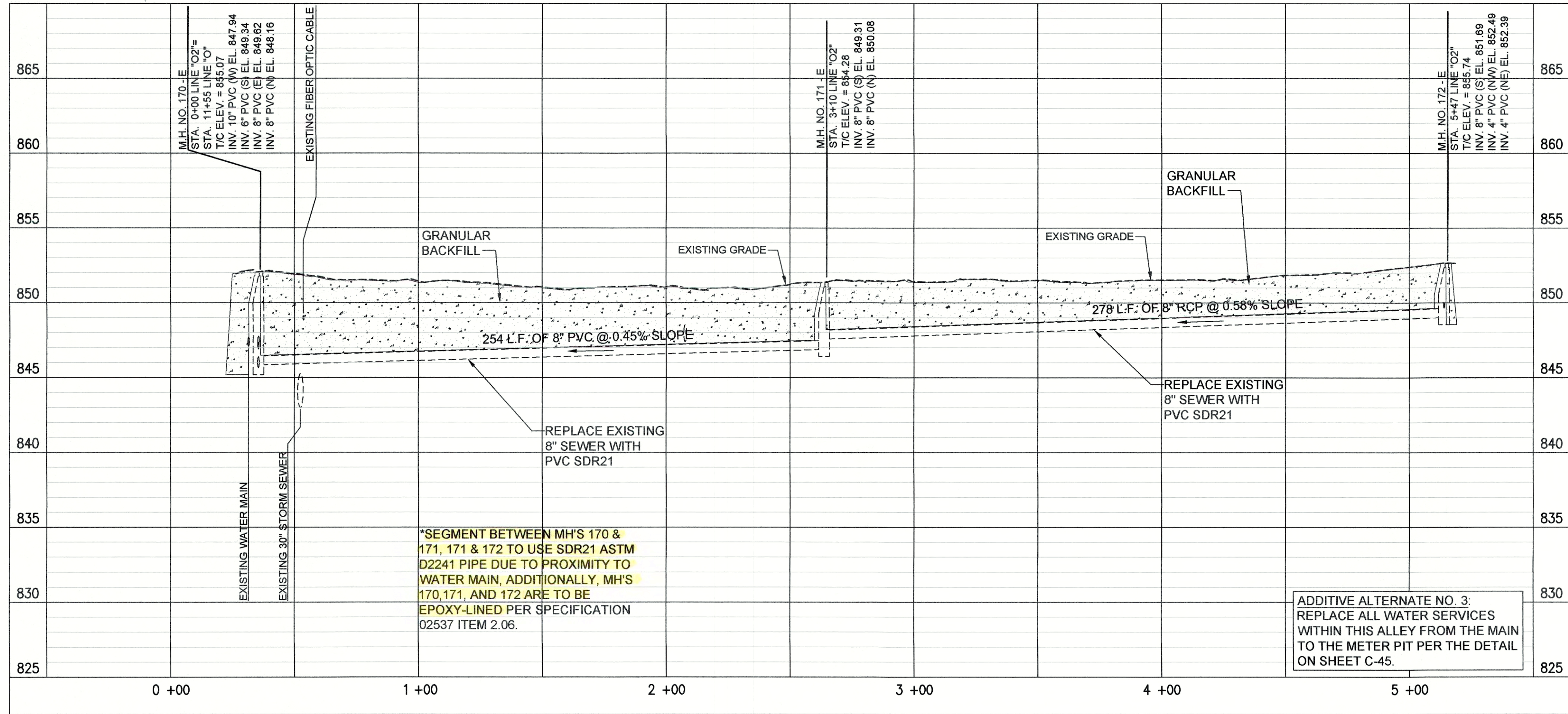
DESIGNED	BY	DATE	DESCRIPTION

GWL	GCR	GWL	JPT

DATE: MARCH 2017  
SCALE: H.-1"=30', V.-1"=5'  
SHEET NO. C-35

THIS MARK SHOULD MEASURE EXACTLY 1" WHEN NOTED  
SCALE CHECK





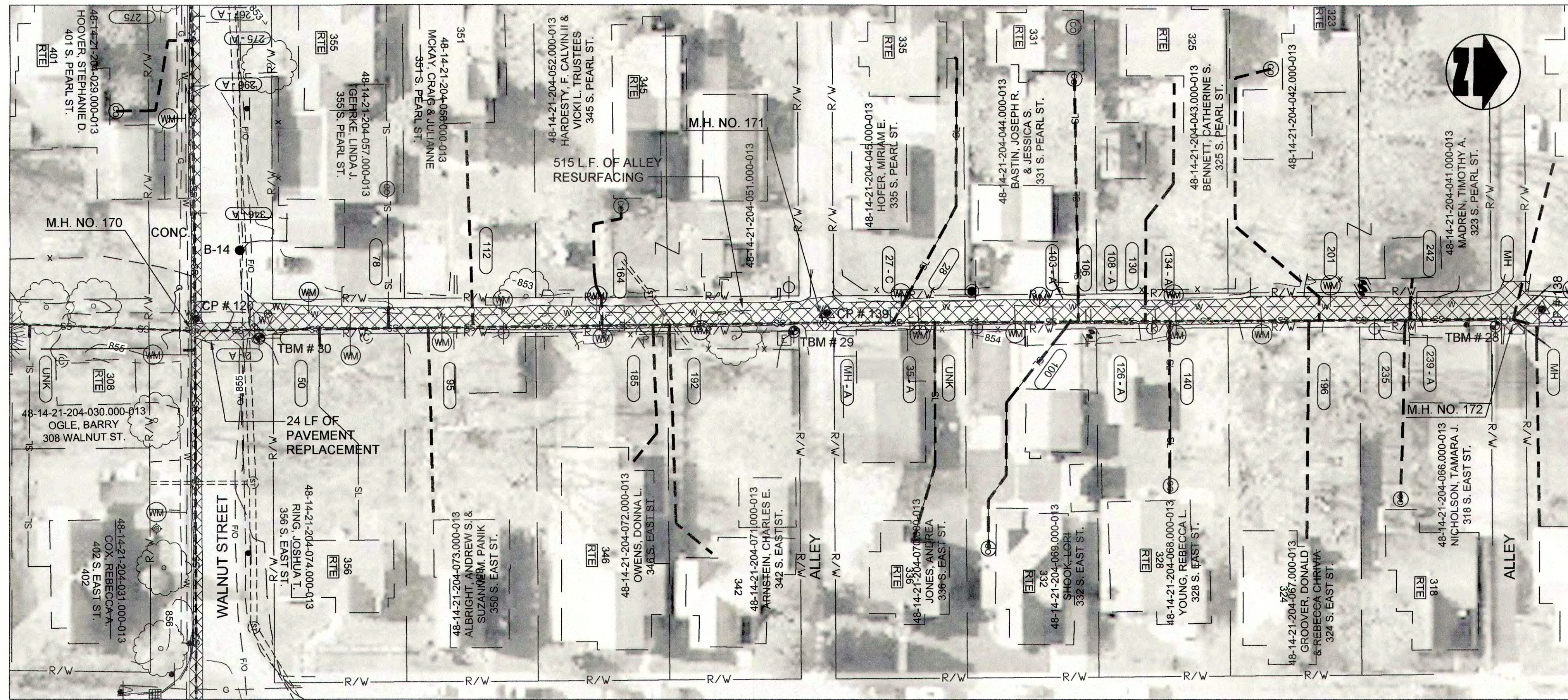
PROFILE - STA. 0+00 TO STA. 5+50 LINE "O2"

PROPOSED LEGEND

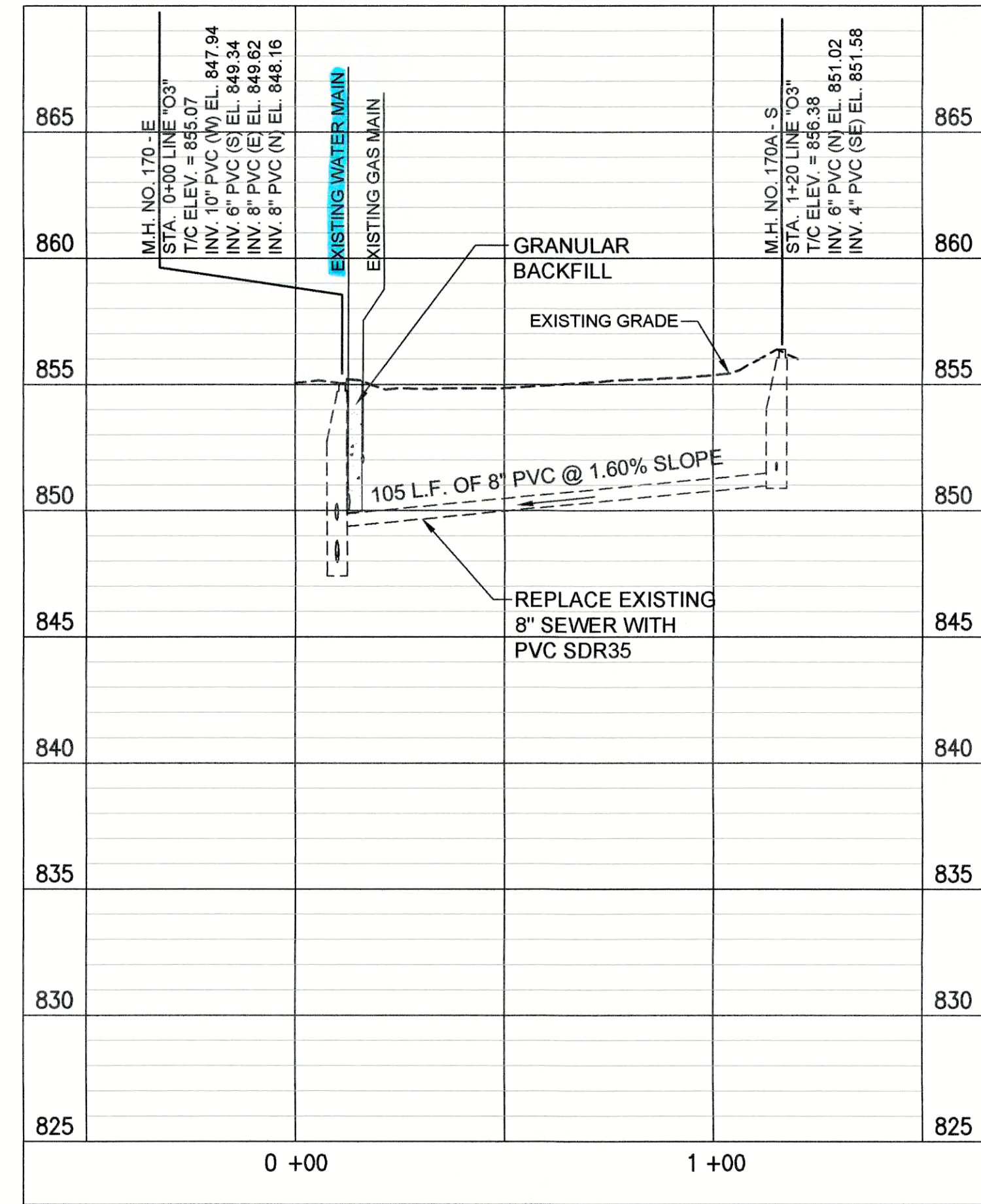
- |   |                             |   |                                  |
|---|-----------------------------|---|----------------------------------|
| — | PROPOSED PERMANENT EASEMENT | — | PROPOSED SANITARY LATERAL        |
| — | PROPOSED RIGHT-OF-WAY       | — | SURFACE RESTORATION AND BACKFILL |
| — | PROPOSED SANITARY SEWER     |   |                                  |

(A) PIPE SEGMENT TO BE ABANDONED

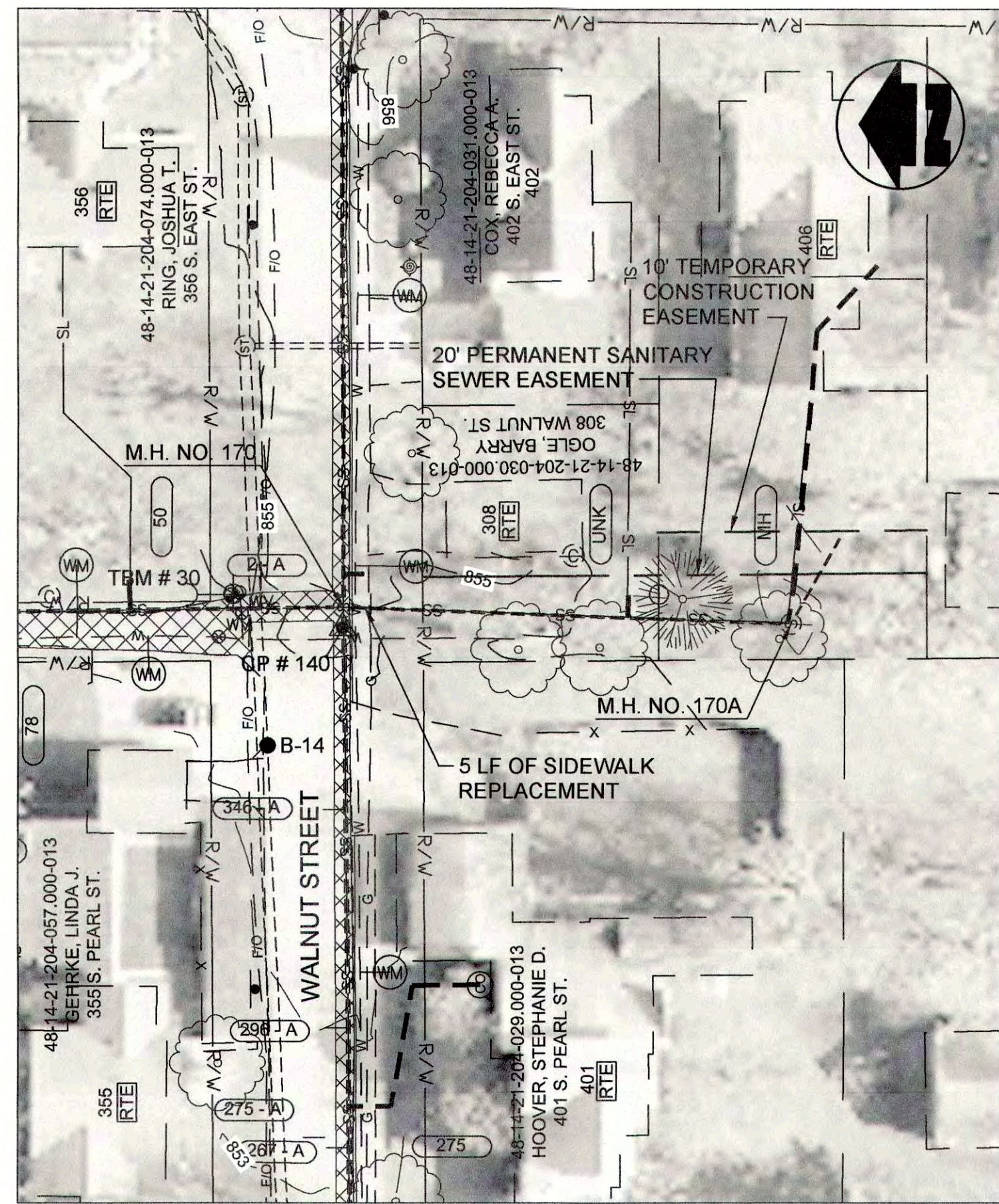
- NOTES:
- LETTERS SHOWN NEXT TO MANHOLE NUMBERS IN THE PROFILE CORRESPOND TO REHABILITATION SCHEDULE ON SHEET C-42.
  - SEE SHEETS C-01 THROUGH C-15 FOR NOTES ON LATERAL REHABILITATION WORK.



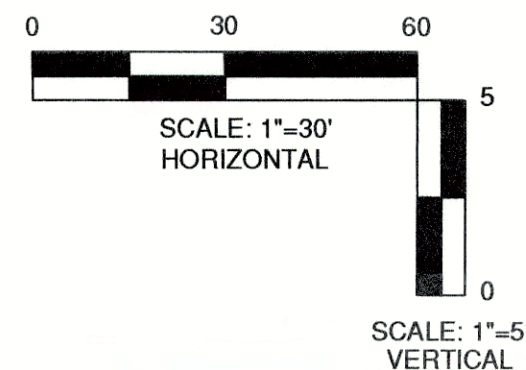
PLAN VIEW - STA. 0+00 TO STA. 5+50 LINE "O2" CIPP LINED PER BID ALTERNATE



PROFILE - STA. 0+00 TO STA. 1+20 LINE "O3"



PLAN VIEW - STA. 0+00 TO STA. 1+20 LINE "O3" CIPP LINED PER BID ALTERNATE



REVISIONS		DESIGNED	BY	DATE	DESCRIPTION
NO.	DATE	BY	DATE	DESCRIPTION	
1					
2					
3					
4					
5					
6					
7					
8					
9					
10					

DATE:	MARCH 2017
SCALE:	H.-1"=30', V.-1"=5'
SHEET NO.:	C-36

DESIGNED	GWL	BY	---
DRAWN	GCR	DATE	---
REVIEWED	GWL	DATE	---
APPROVED	JPT	DATE	---

PLAN AND PROFILE  
LINE "O2" AND LINE "O3"  
SEWER REHABILITATION PROJECT PHASE II  
TOWN OF PENDLETON, INDIANA

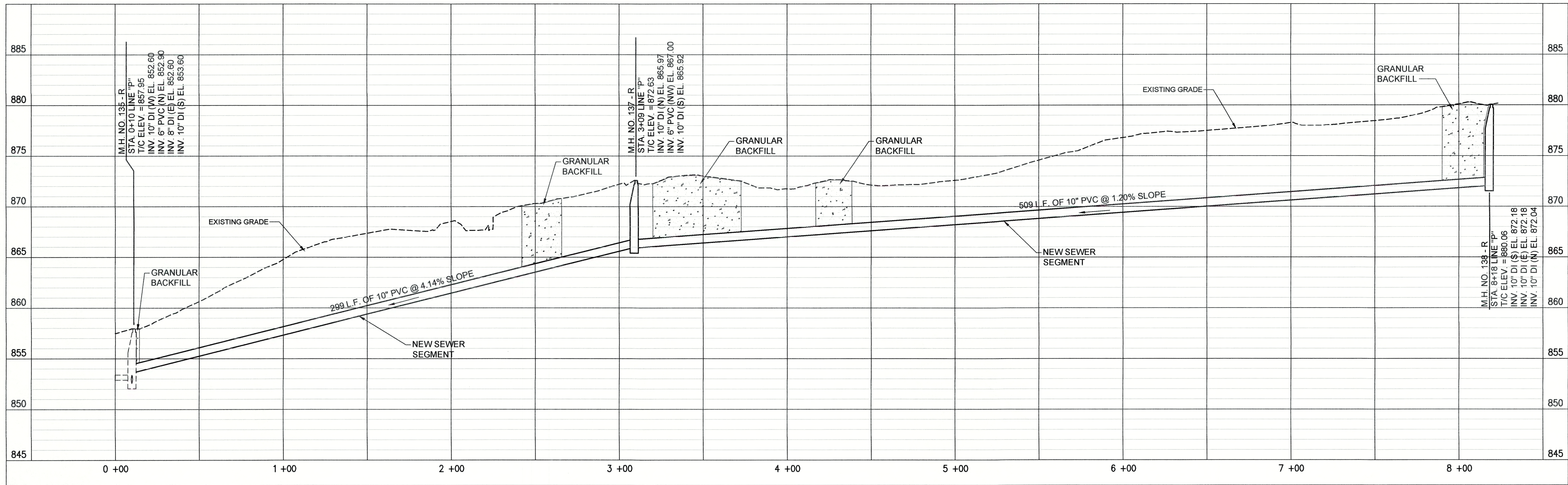
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GRW PROJECT NO. 4447-24  
SRF NO. WW6074803 --

JOSEPH P. TIENEY  
REGISTERED  
No. 19300407  
STATE OF INDIANA  
PROFESSIONAL ENGINEER



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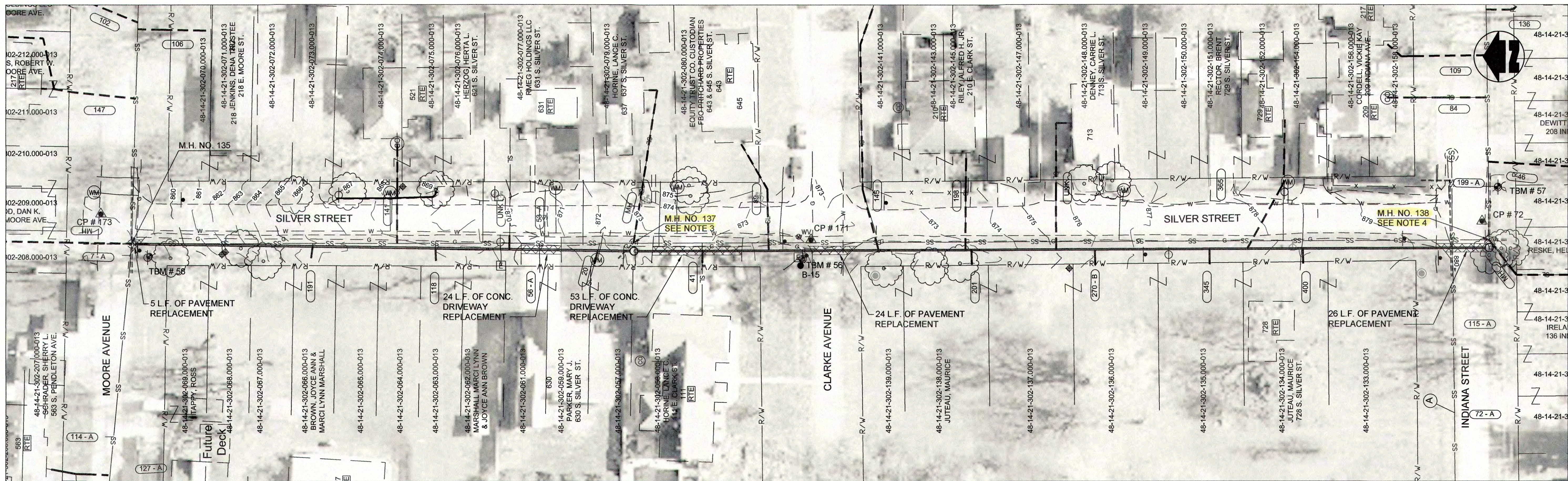
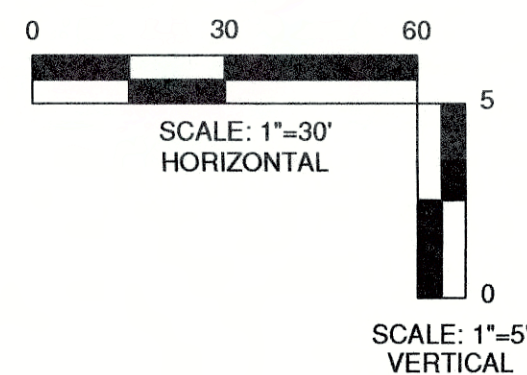


PROFILE - STA. 0+00 TO STA. 8+25 LINE "P"

- NOTES:
- LETTERS SHOWN NEXT TO MANHOLE NUMBERS IN THE PROFILE CORRESPOND TO REHABILITATION SCHEDULE ON SHEET C-42.
  - SEE SHEETS C-01 THROUGH C-15 FOR NOTES ON LATERAL REHABILITATION WORK.
  - DEMOLISH EXISTING MH 137, INSTALL NEW MH 137 AS SHOWN, AND RECONNECT EXISTING LATERALS FROM EAST AND NORTHWEST.
  - DEMOLISH EXISTING MH 138, INSTALL NEW MH 138 AS SHOWN, AND RECONNECT EXISTING PIPING FROM EAST AND LATERAL FROM SOUTHWEST.

PROPOSED LEGEND

- |  |                             |  |                                  |
|--|-----------------------------|--|----------------------------------|
|  | PROPOSED PERMANENT EASEMENT |  | PROPOSED SANITARY LATERAL        |
|  | PROPOSED RIGHT-OF-WAY       |  | SURFACE RESTORATION AND BACKFILL |
|  | PROPOSED SANITARY SEWER     |  |                                  |



PLAN VIEW - STA. 0+00 TO STA. 8+25 LINE "P" *MOVED WEST TO AVOID GAS MAIN*

PLAN AND PROFILE  
LINE "P"  
SEWER REHABILITATION PROJECT PHASE II  
TOWN OF PENDLETON, INDIANA

REVISED	DESIGNED				JPT
	DATE	BY	DATE	BY	
NO.					
DESCRIPTION					
THIS MARK SHOULD MEASURE EXACTLY 1" WHEN PLOTTED					

DATE: MARCH 2017  
SCALE: 1"=30', V.-1"=5'  
SHEET NO.

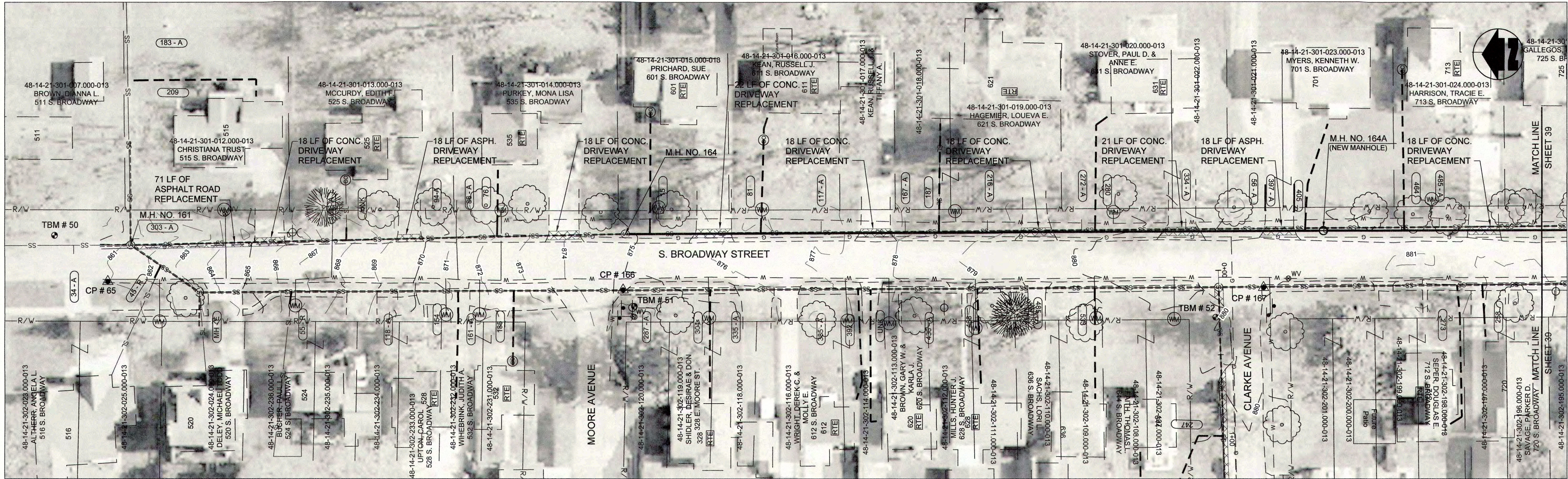
C-37

JOSEPH P. TIERNEY  
No. 19300407  
STATE OF INDIANA  
PROFESSIONAL ENGINEER  
GRW PROJECT NO. 4447-24  
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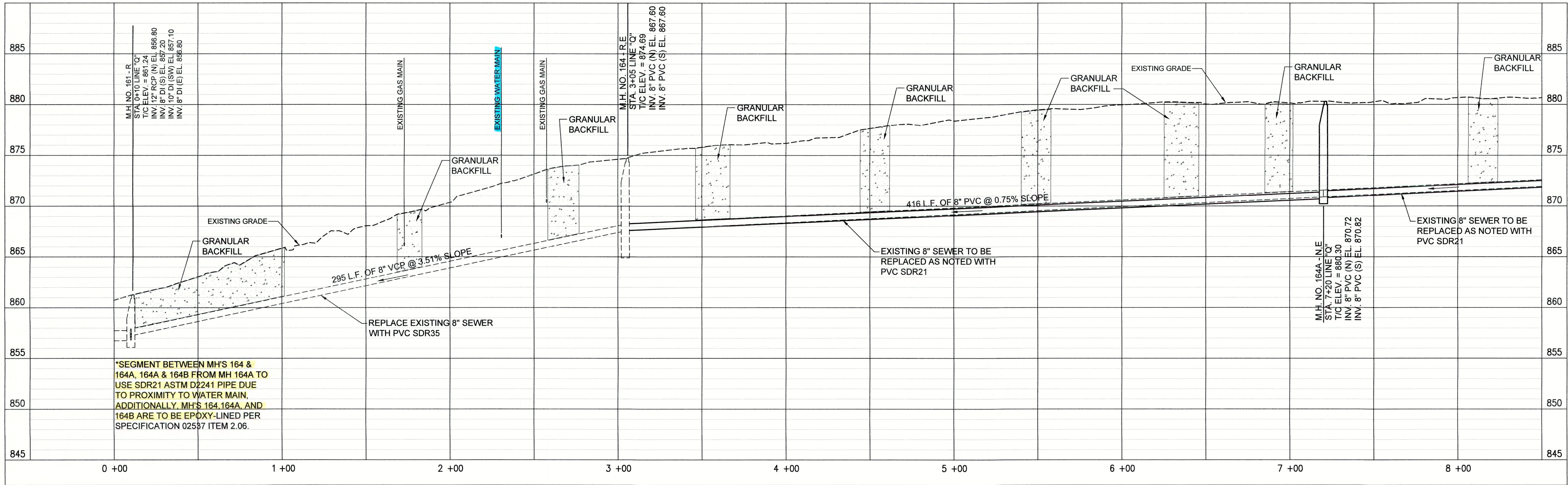
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FILE NAME: G:\447-FCRMD-2015\Working Drawings\AutoCAD\REHABILITATION PHASE II\447-24-C-38.dwg  
PRINTED: 3/14/2017 @ 2:11PM



PLAN VIEW - STA. 0+00 TO STA. 8+50 LINE "Q"



PROFILE - STA. 0+00 TO STA. 8+50 LINE "Q"

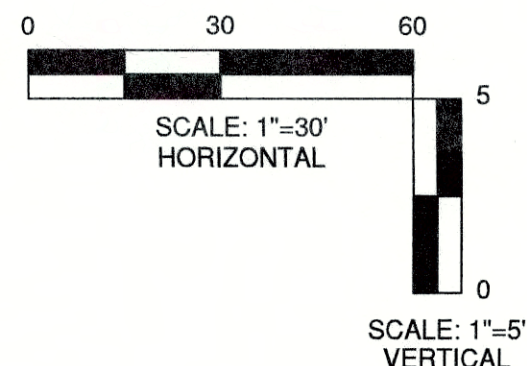
SHEET NOTE:  
SEWER IN PROFILE IS ON EAST SIDE OF ROAD. SEWER  
ON WEST SIDE OF ROAD TO BE CIPP LINED.

(A) PIPE SEGMENT TO BE ABANDONED

- NOTES:
- LETTERS SHOWN NEXT TO MANHOLE NUMBERS IN THE PROFILE CORRESPOND TO REHABILITATION SCHEDULE ON SHEET C-42.
  - SEE SHEETS C-01 THROUGH C-15 FOR NOTES ON LATERAL REHABILITATION WORK.
  - NEW SEWER HAS ALIGNMENT SHIFTED WEST FROM EXISTING TO INCREASE DISTANCE FROM WATER MAIN. SERVICE REPLACEMENTS SHALL BE EXTENDED TO NEW MAIN LOCATION.

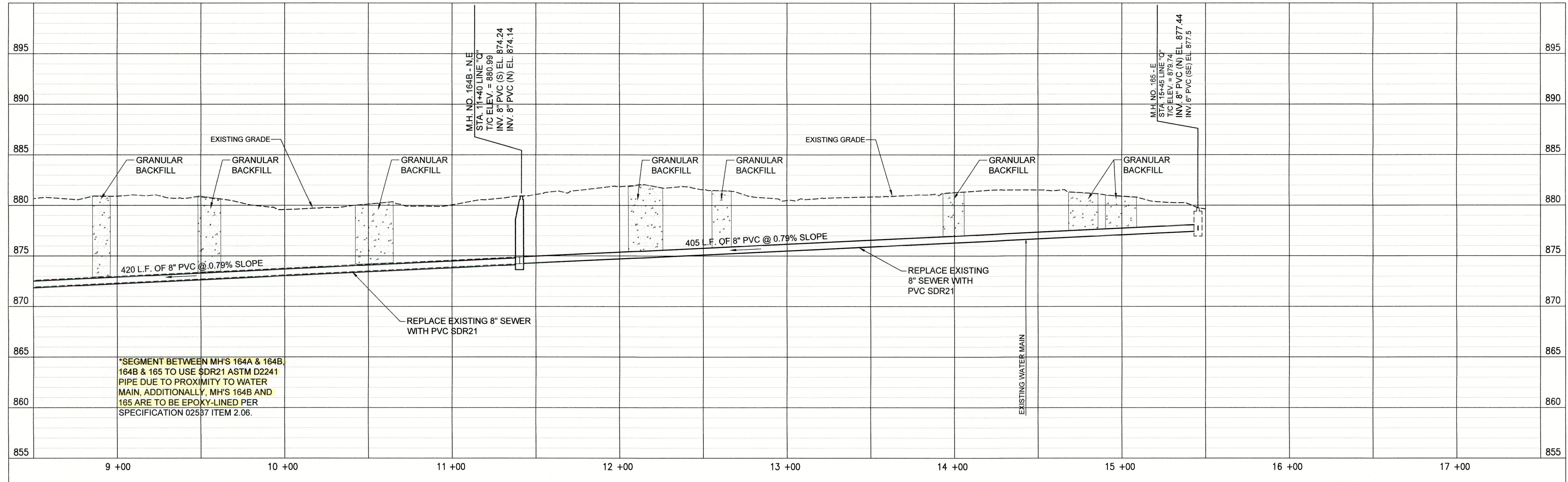
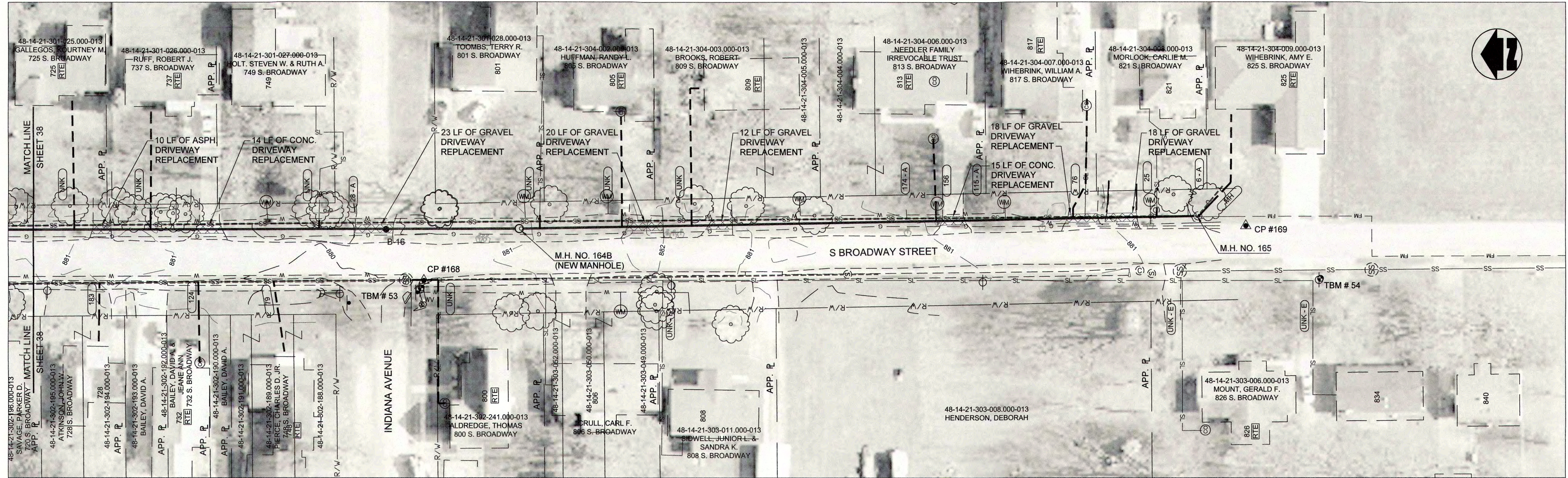
PROPOSED LEGEND

- |  |                             |  |                                  |
|--|-----------------------------|--|----------------------------------|
|  | PROPOSED PERMANENT EASEMENT |  | PROPOSED SANITARY LATERAL        |
|  | PROPOSED RIGHT-OF-WAY       |  | SURFACE RESTORATION AND BACKFILL |
|  | PROPOSED SANITARY SEWER     |  |                                  |



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PLAN AND PROFILE	
LINE "Q"	
SEWER REHABILITATION PROJECT PHASE II	
TOWN OF PENDLETON, INDIANA	
DESIGNED:	GWL
BY:	GCR
DATE:	
REVIEWED:	GWL
APPROVED:	JPT
THIS MARK SHOULD MEASURE EXACTLY 1\"/>	
DATE: MARCH 2017	
SCALE: H.-1\"/>	
SHEET NO. C-38	





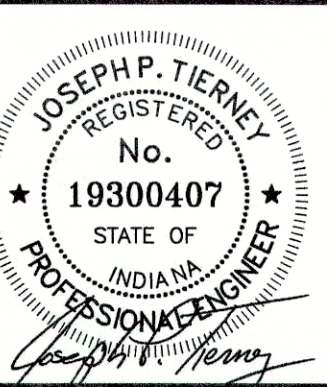
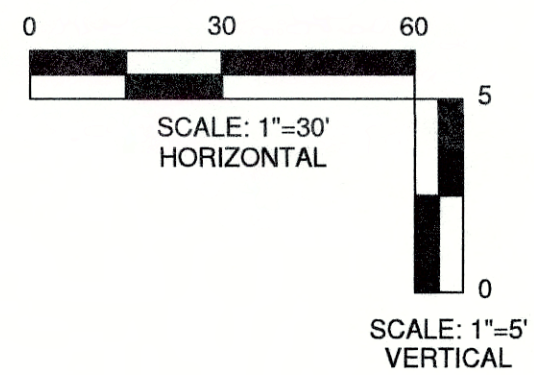
SHEET NOTES:  
SEWER IN PROFILE IS ON EAST SIDE OF ROAD. SEWER ON WEST SIDE OF ROAD TO BE CIPP LINED.

(A) PIPE SEGMENT TO BE ABANDONED

- NOTES:
- LETTERS SHOWN NEXT TO MANHOLE NUMBERS IN THE PROFILE CORRESPOND TO REHABILITATION SCHEDULE ON SHEET C-42.
  - SEE SHEETS C-01 THROUGH C-15 FOR NOTES ON LATERAL REHABILITATION WORK.
  - NEW SEWER HAS ALIGNMENT SHIFTED WEST FROM EXISTING TO INCREASE DISTANCE FROM WATER MAIN. SERVICE REPLACEMENTS SHALL BE EXTENDED TO NEW MAIN LOCATION.

#### PROPOSED LEGEND

- |  |                             |  |                                  |
|--|-----------------------------|--|----------------------------------|
|  | PROPOSED PERMANENT EASEMENT |  | PROPOSED SANITARY LATERAL        |
|  | PROPOSED RIGHT-OF-WAY       |  | SURFACE RESTORATION AND BACKFILL |
|  | PROPOSED SANITARY SEWER     |  |                                  |



GRW PROJECT NO. 4447-24  
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JPT



## PLAN AND PROFILE LINE "Q" SEWER REHABILITATION PROJECT PHASE II TOWN OF PENDLETON, INDIANA

DESIGNED	GWL	BY	DATE

DESIGNED	GWL	BY	DATE

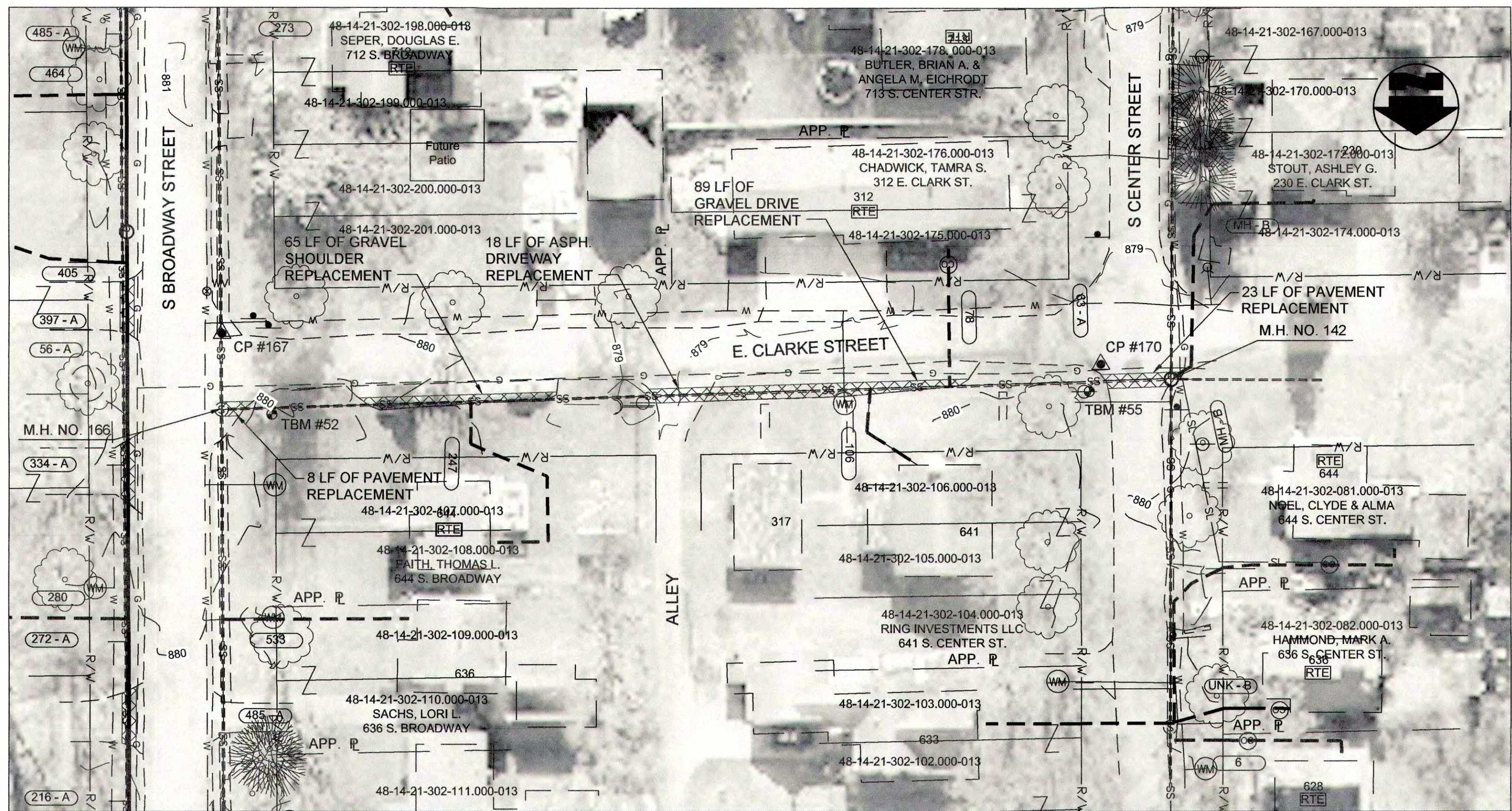
DESIGNED	GWL	BY	DATE

DESIGNED	GWL	BY	DATE

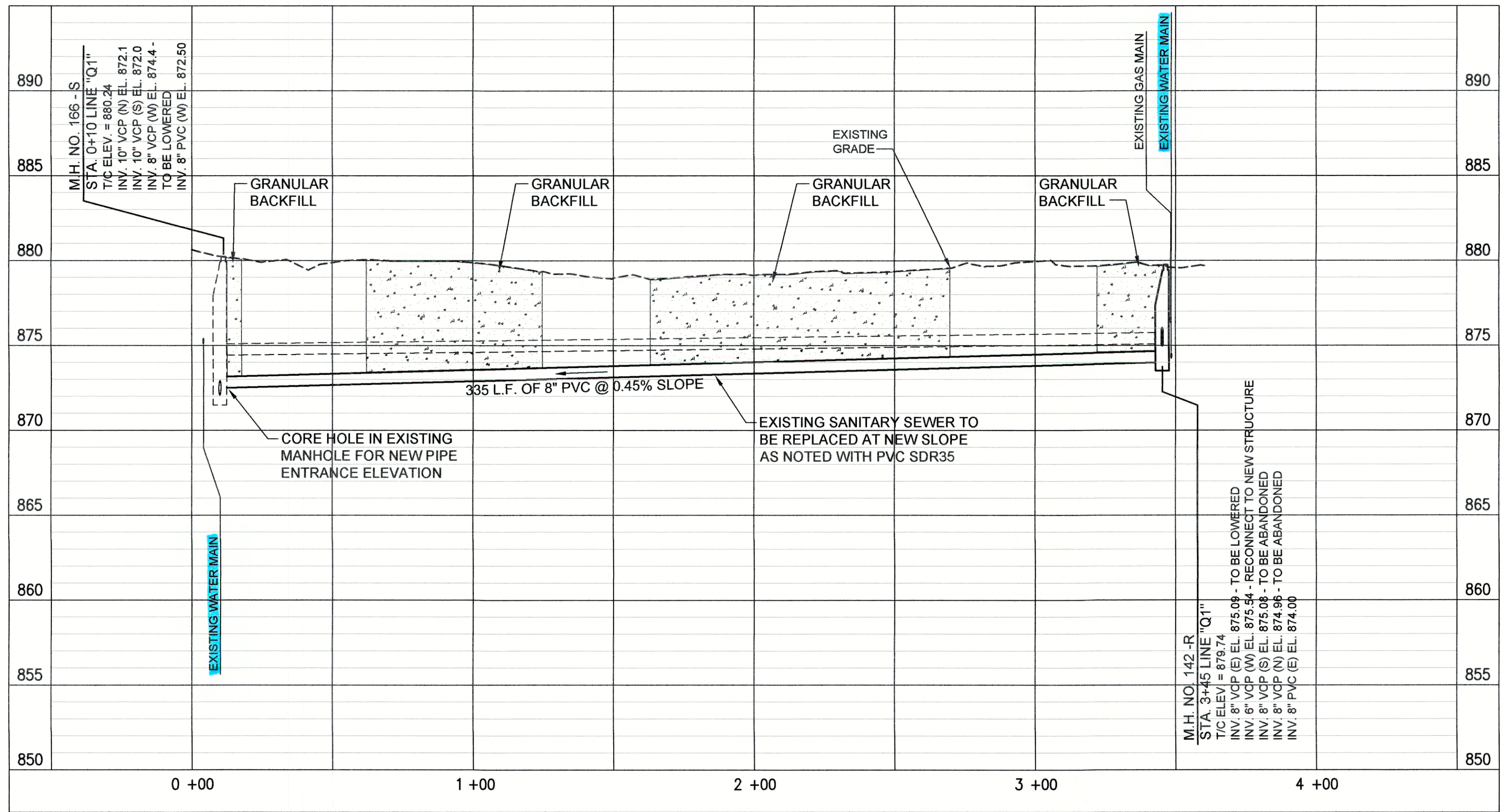
DESIGNED	GWL	BY	DATE

DESIGNED	GWL	BY	DATE





PLAN VIEW - STA. 0+00 TO STA. 3+60 LINE "Q1"



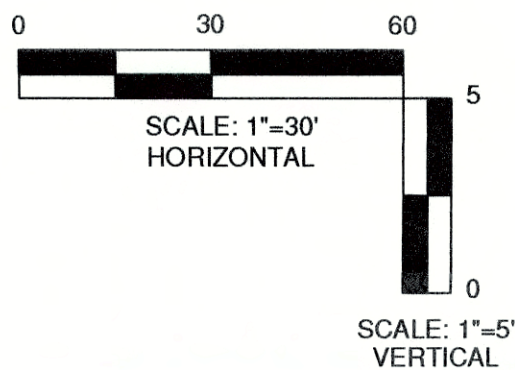
PROFILE - STA. 0+00 TO STA. 3+60 LINE "Q1"

PROPOSED LEGEND

- |   |                             |      |                                  |
|---|-----------------------------|------|----------------------------------|
| — | PROPOSED PERMANENT EASEMENT | —    | PROPOSED SANITARY LATERAL        |
| — | PROPOSED RIGHT-OF-WAY       | XXXX | SURFACE RESTORATION AND BACKFILL |
| — | PROPOSED SANITARY SEWER     |      |                                  |

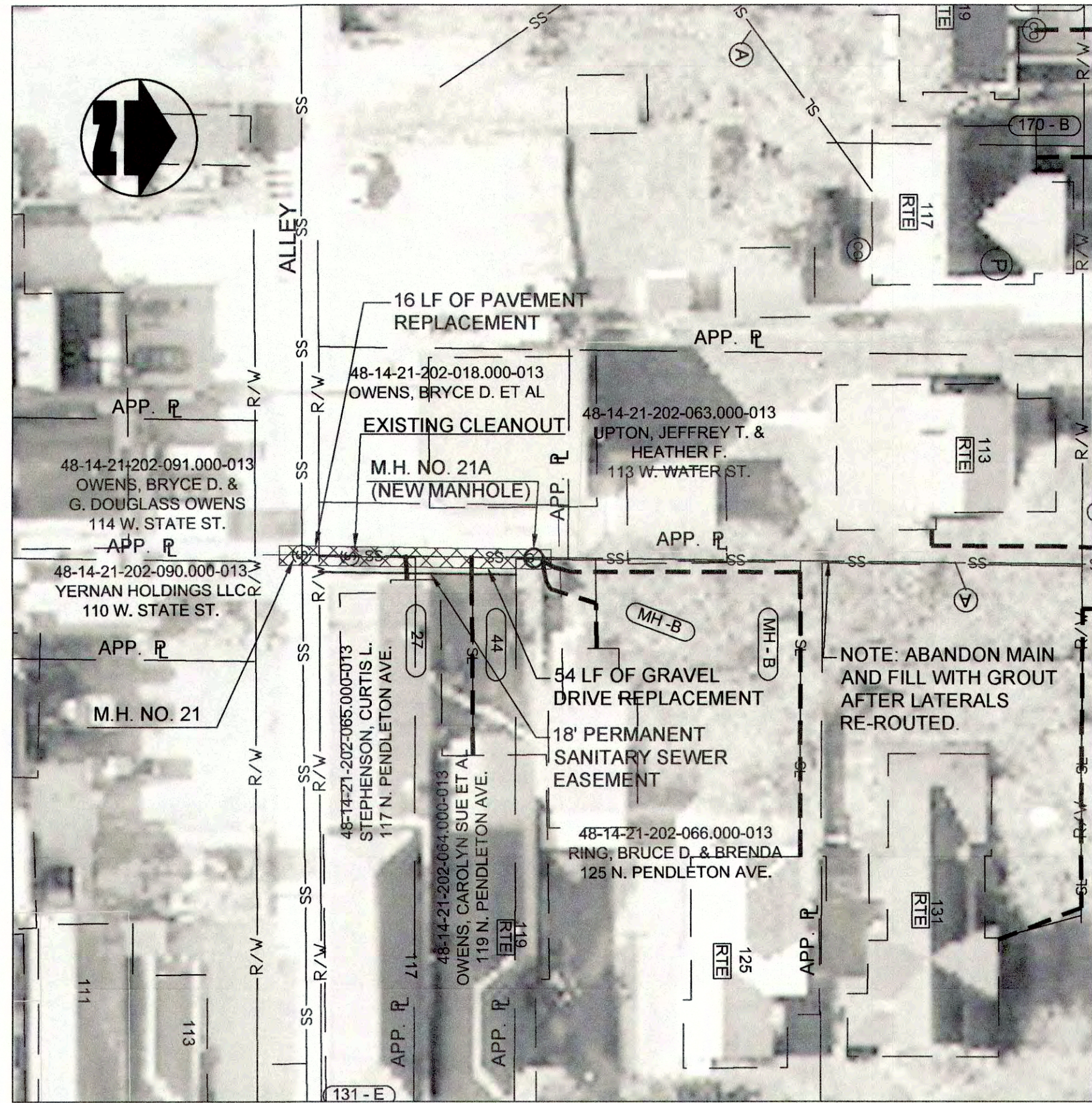
(A) PIPE SEGMENT TO BE ABANDONED

- NOTES:
- LETTERS SHOWN NEXT TO MANHOLE NUMBERS IN THE PROFILE CORRESPOND TO REHABILITATION SCHEDULE ON SHEET C-42.
  - SEE SHEETS C-01 THROUGH C-15 FOR NOTES ON LATERAL REHABILITATION WORK.

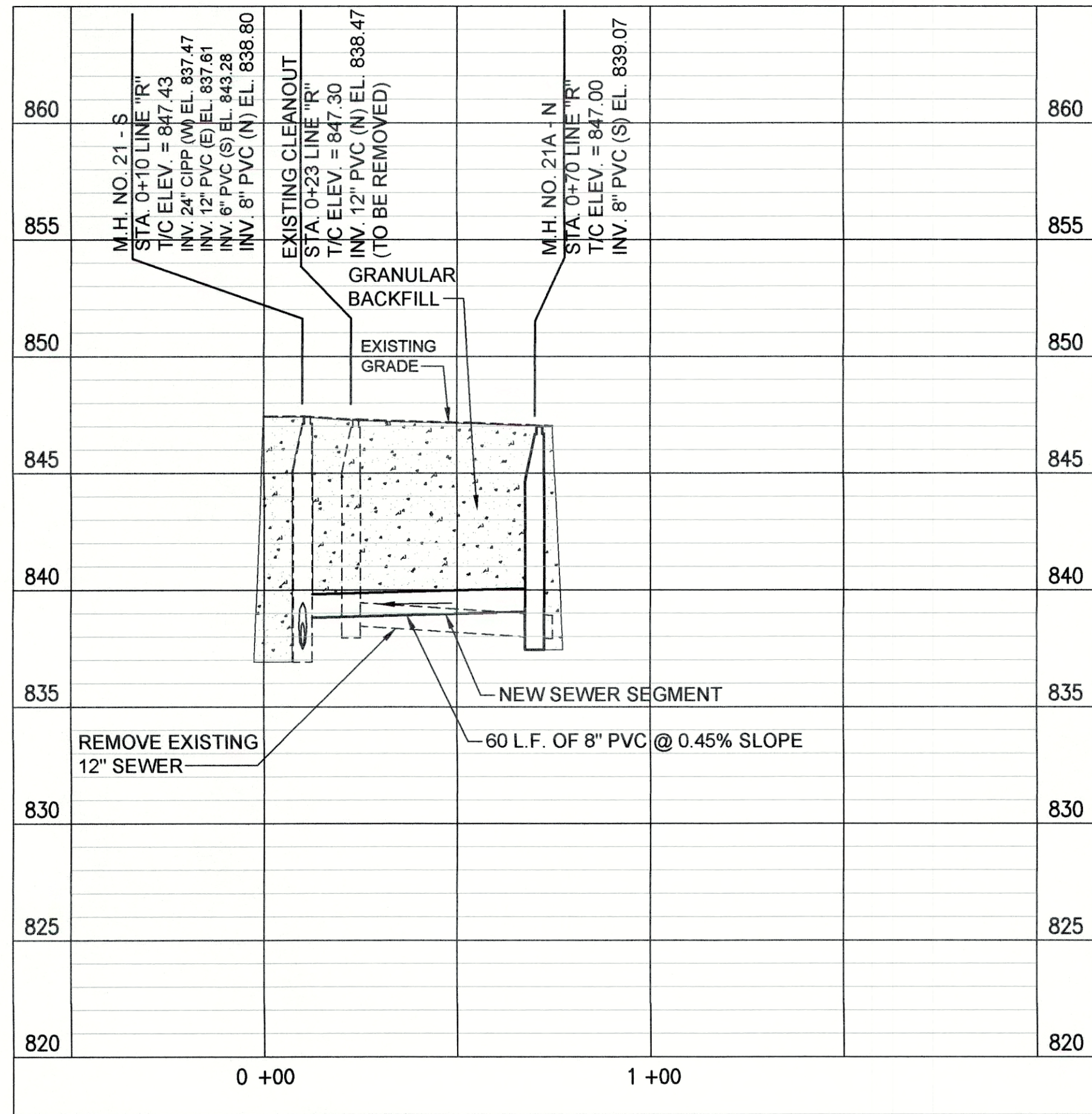


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PLAN AND PROFILE LINE "Q1" SEWER REHABILITATION PROJECT PHASE II TOWN OF PENDLETON, INDIANA	
DESIGNED GWL	BY GWL
DRAWN GWL	REVIEWED GWL
APPROVED JPT	DATE MARCH 2017
SCALE: H.-1"=30', V.-1"=5'	
SHEET NO. C-40	

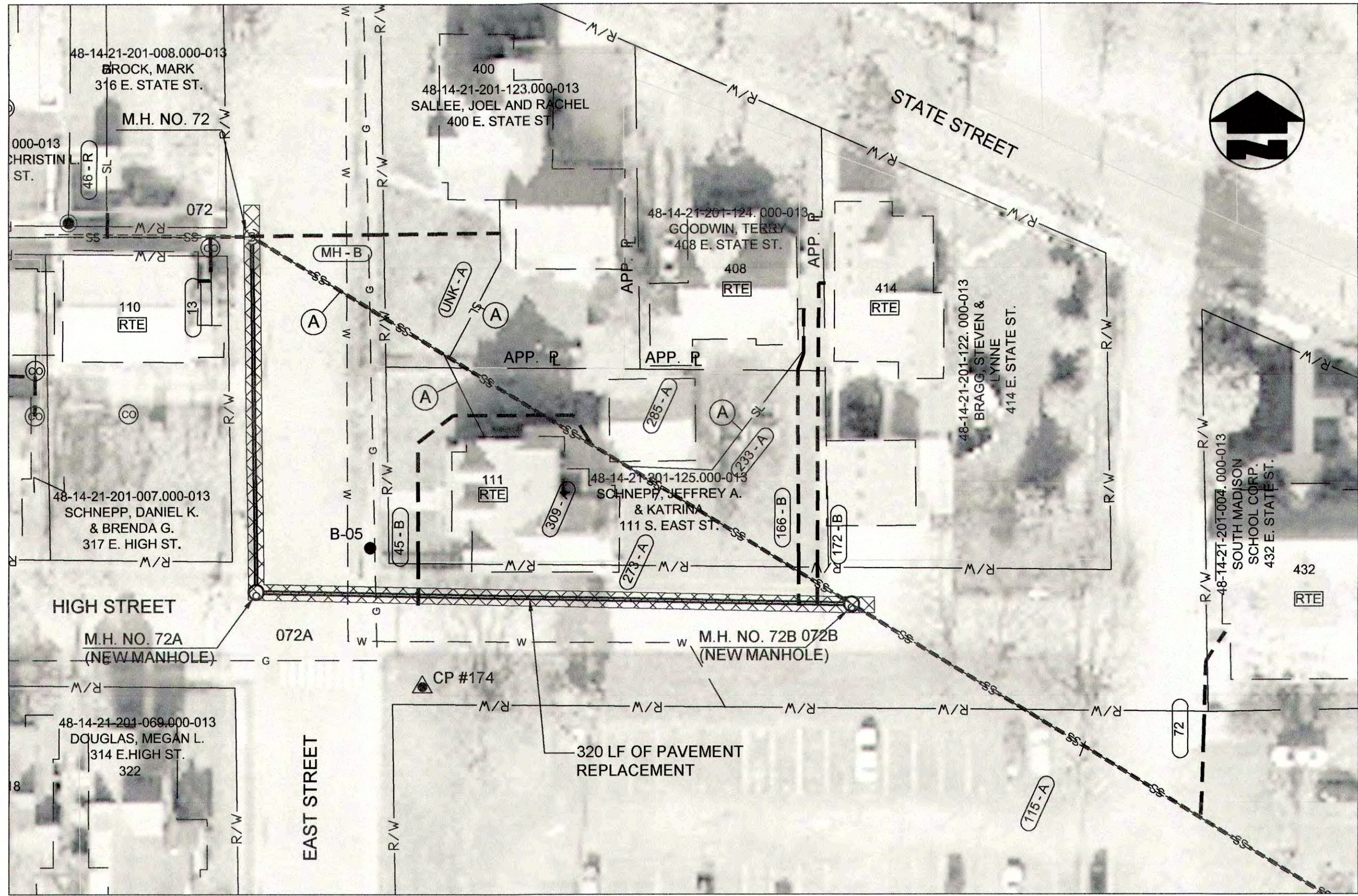




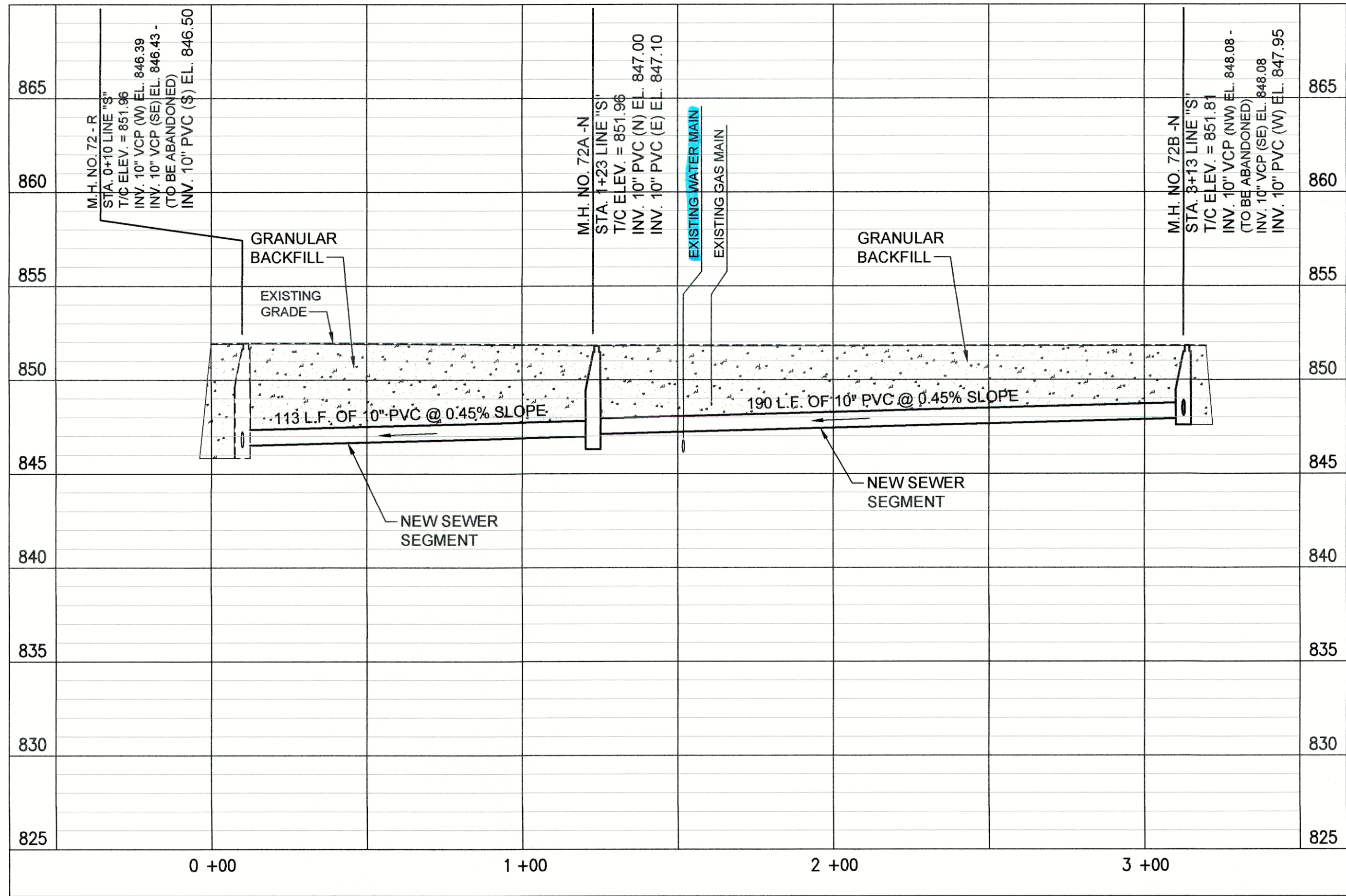
PLAN VIEW - STA. 0+00 TO STA. 0+75 LINE "R"



PROFILE - STA. 0+00 TO STA. 0+75 LINE "R"



PLAN VIEW - STA. 0+00 TO STA. 3+20 LINE "S"



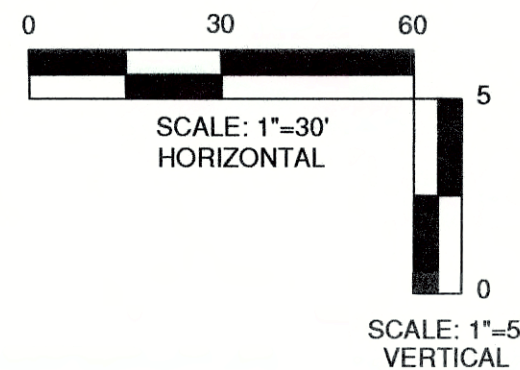
PROFILE - STA. 0+00 TO STA. 3+20 LINE "S"

(A) PIPE SEGMENT TO BE ABANDONED

- NOTES:
- LETTERS SHOWN NEXT TO MANHOLE NUMBERS IN THE PROFILE CORRESPOND TO REHABILITATION SCHEDULE ON SHEET C-42.
  - SEE SHEETS C-01 THROUGH C-15 FOR NOTES ON LATERAL REHABILITATION WORK.

PROPOSED LEGEND

- |   |                             |   |                                  |
|---|-----------------------------|---|----------------------------------|
| — | PROPOSED PERMANENT EASEMENT | — | PROPOSED SANITARY LATERAL        |
| — | PROPOSED RIGHT-OF-WAY       | — | SURFACE RESTORATION AND BACKFILL |
| — | PROPOSED SANITARY SEWER     | — |                                  |



JOSEPH P. TIERNEY  
REGISTERED  
No. 19300407  
STATE OF INDIANA  
Professional Engineer

GRW PROJECT NO. 4447-24  
SRF NO. WW18074803 --

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PLAN AND PROFILE  
LINE "R" AND LINE "S"  
SEWER REHABILITATION PROJECT PHASE II  
TOWN OF PENDLETON, INDIANA

DESIGNED		DRAWN		REVIEWED		APPROVED	
DATE	BY	DATE	BY	DATE	BY	DATE	BY

REVISIONS

NO.	DESCRIPTION

DATE: MARCH 2017  
SCALE: H.-1"=30', V.-1"=5'  
SHEET NO.

C-41







SANITARY SEWER CIPP REHABILITATION SCHEDULE			
SEGMENT (USMH-DSMH)	APPROX. LENGTH (LF)	NOMINAL PIPE DIAMETER (IN.)	APPROX. NUMBER OF ACTIVE SERVICE CONNECTION
049-048	99	12	0
056-027	484	12	3
059-058	452	8	22
065-056	221	12	2
065A-065	---	8	1
066-065	327	12	9
067-066	101	12	0
068-067	121	8	2
069-068	73	8	1
072-067	224	8	4
073-072B	200	8	1
073A-073	177	8	1
073B-073A	479	8	0
073C-073B	97	8	0
074-073	496	8	3
075-074	83	8	0
093-091	216	8	4
094-093	333	8	14
000-001A	149	12	0
095-000	65	12	0
096-095	486	12	3
097-096	342	8	5
098-097	278	8	5
101-105	280	8	7
102-099	358	12	2
103-102	464	12	2
104-103	107	12	0
105-104	145	12	0
105A-105	14	12	0
106-105A	298	12	5
109-108	290	8	3
110-109	266	8	7
111-108	160	8	1
112-111	290	8	3
113-112	350	8	9
114-113	473	8	6
115-112	57	8	0
116-115	131	8	2
117-116	200	8	3
118-117	380	8	9

USMH - UPSTREAM MANHOLE ALONG LINE SEGMENT  
DSMH - DOWNSTREAM MANHOLE ALONG LINE SEGMENT  
\*ACCESS AT SOUTH END BY CLEANOUT ONLY

SANITARY SEWER CIPP REHABILITATION SCHEDULE			
SEGMENT (USMH-DSMH)	APPROX. LENGTH (LF)	NOMINAL PIPE DIAMETER (IN.)	APPROX. NUMBER OF ACTIVE SERVICE CONNECTION
122-121A	30	8	0
123-122	184	8	3
124-123	404	10	5
124A-124	141	8	0
124A-132	27	10	0
125-124A	99	10	1
126-125	200	10	2
128-126	192	10	0
129-128	361	10	6
130-129	296	8	5
132-133	286	10	4
133-134	326	10	3
135-132	196	8	1
139-135	235	8	4
140-139	60	8	1
141-140	268	8	6
143-144	212	8	3
144-138	292	10	5
145-144	171	10	2
149-134	202	12	1
152-149	249	12	2
157-156	175	8	5
159-158	73	12	0
160-159	459	8	10
161-159	431	12	4
162-161	309	8	4
163-161	50	10	1
166-163	606	10	8
167-166	415	10	5
173-175	29	8	0
174-173	186	8	4
176-180	177	8	0
177-176	250	8	1
178-177	105	10	0
181-180	201	8	3
181A-181	218	8	0
181B-181A	222	8	2
182-181	204	8	2
183-182	330	8	1
184-183	327	8	2

USMH - UPSTREAM MANHOLE ALONG LINE SEGMENT  
DSMH - DOWNSTREAM MANHOLE ALONG LINE SEGMENT

NOTE:  
ADDITIONAL CIPP SEGMENTS  
COMPLETED AS NOTED PER  
BID ALTERNATE

JOSEPH P. TIERNEY

REGISTERED

No.

19300407

STATE OF

INDIANA

PROFESSIONAL ENGINEER

GRW PROJECT NO. 4447-24

SRF NO. WW16074803 --

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C.I.P.P. REHABILITATION SCHEDULE

SANITARY SEWER REHABILITATION

SEWER REHABILITATION PROJECT PHASE II

TOWN OF PENDLETON, INDIANA

DESIGNED: GWL

BY: GCR

DATE: 3/11/2017

REVIEWED: JPT

APPROVED: JPT

REVISIONS

NO.	DESCRIPTION	DATE	BY

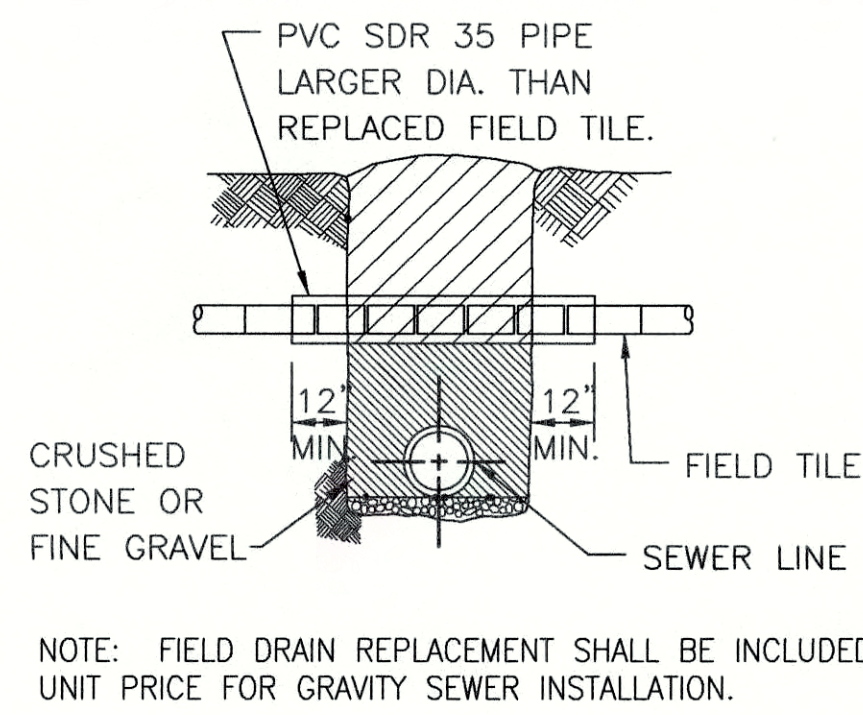
SCALE CHECK: \_\_\_\_\_ THE MARK SHOULD MEASURE EXACTLY IF WHEN PLOTTED

DATE: MARCH 2017

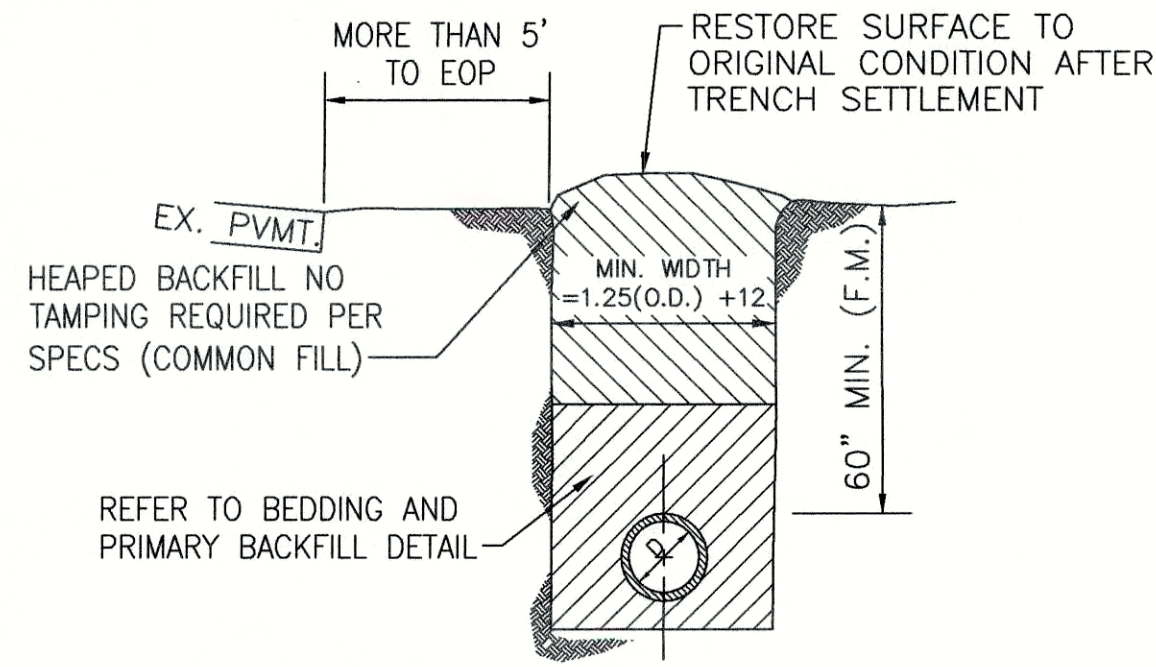
SCALE: NONE

SHEET NO. C-43

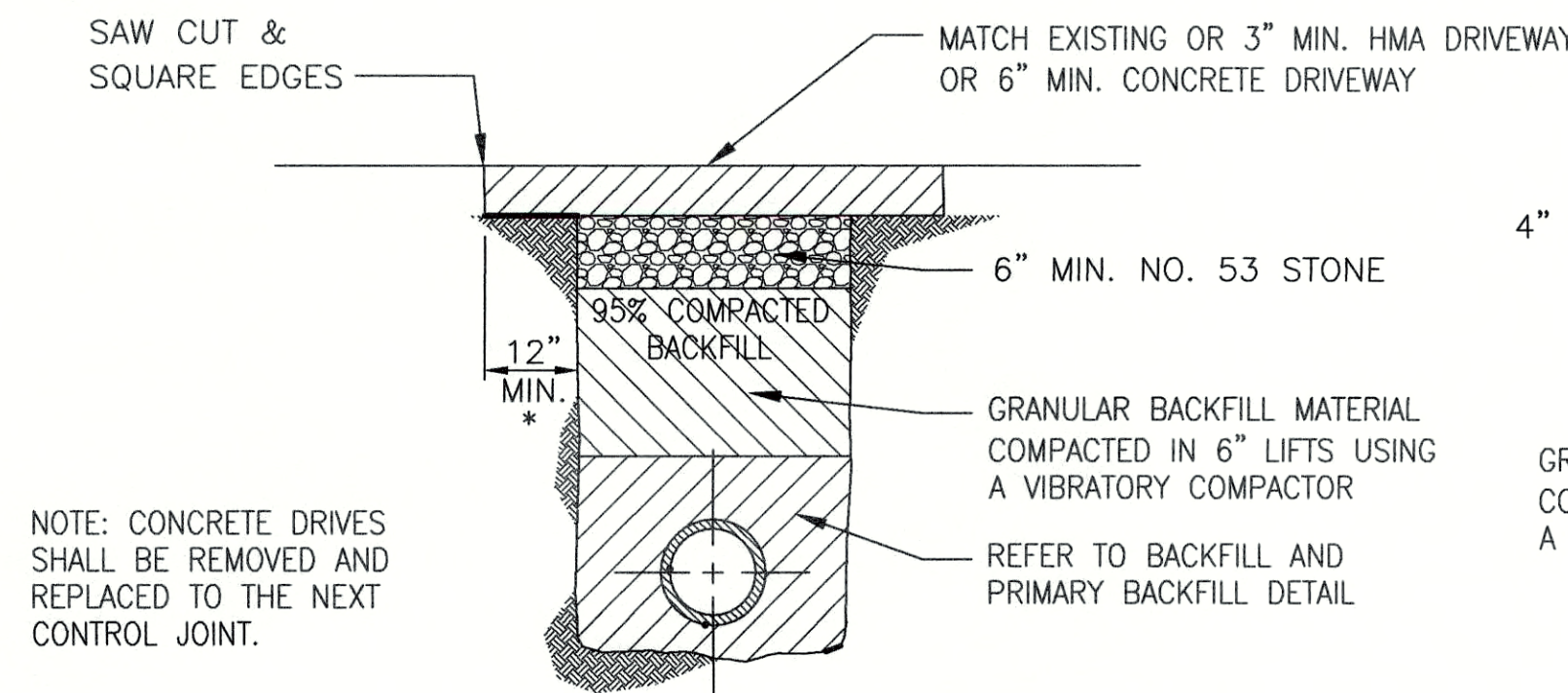




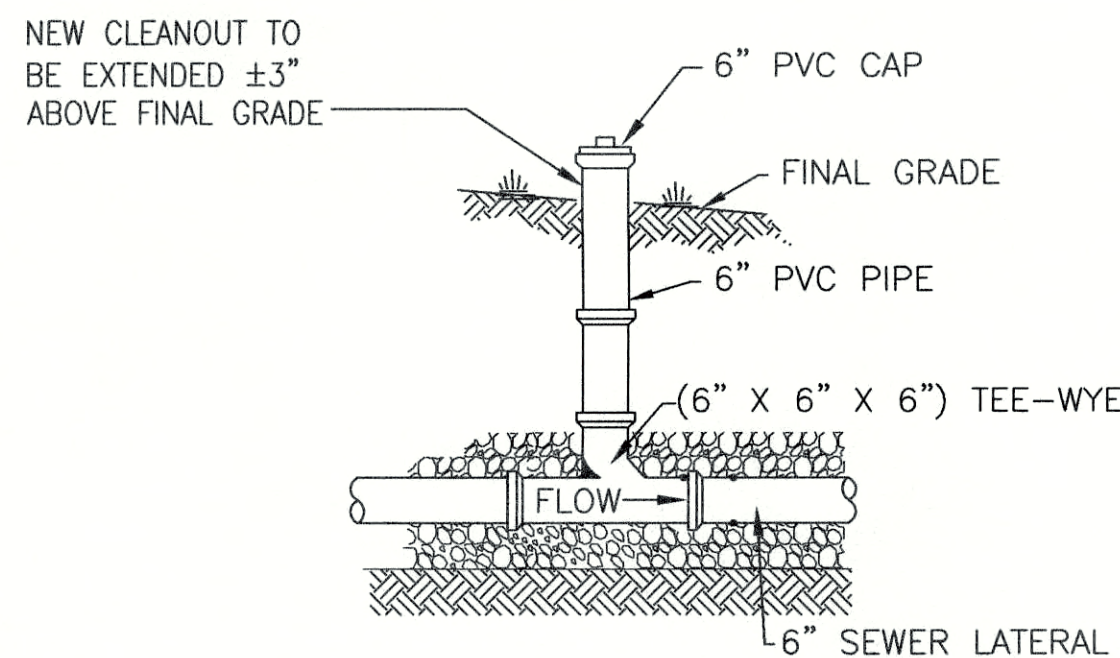
**FIELD DRAIN REPLACEMENT DETAIL**  
SCALE: N.T.S.



**OPEN TERRAIN - METHOD "A"**  
SCALE: N.T.S.

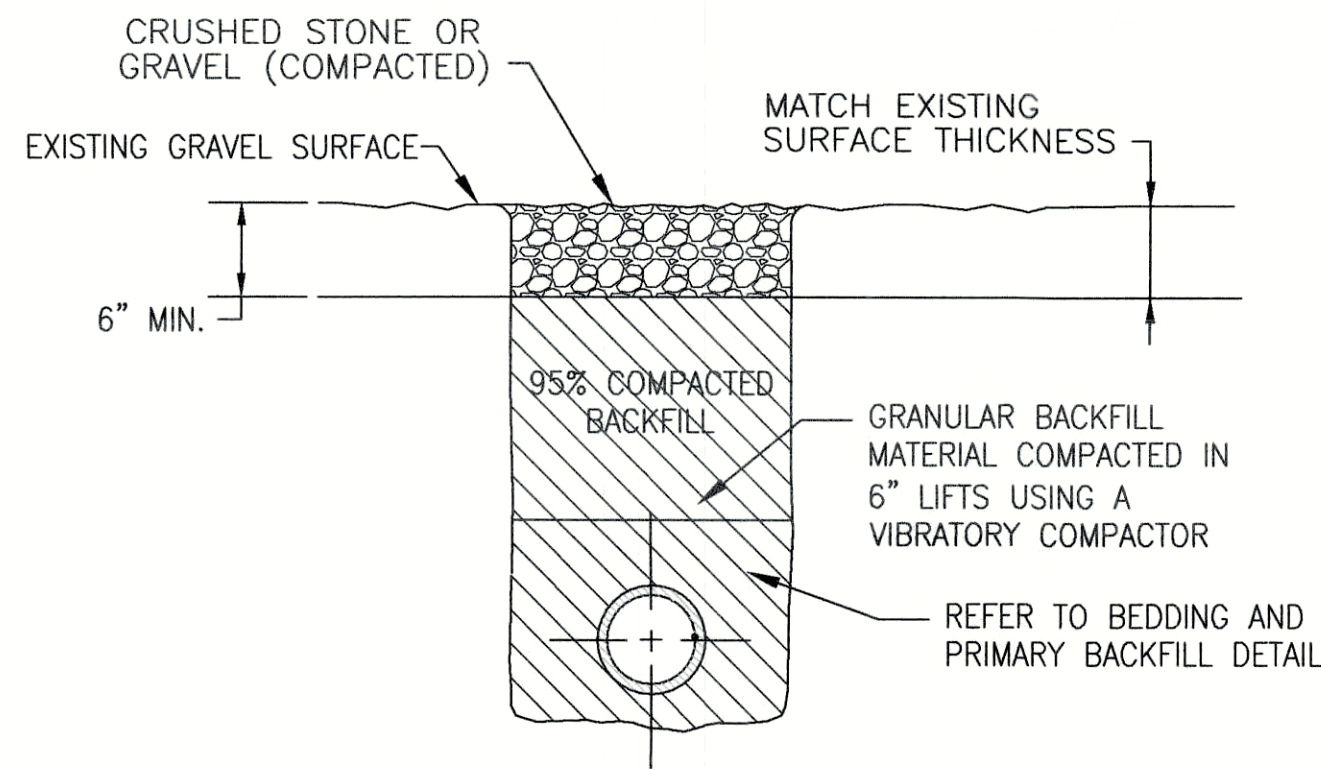


**PAVED DRIVEWAYS - METHOD "D1"**  
SCALE: N.T.S.

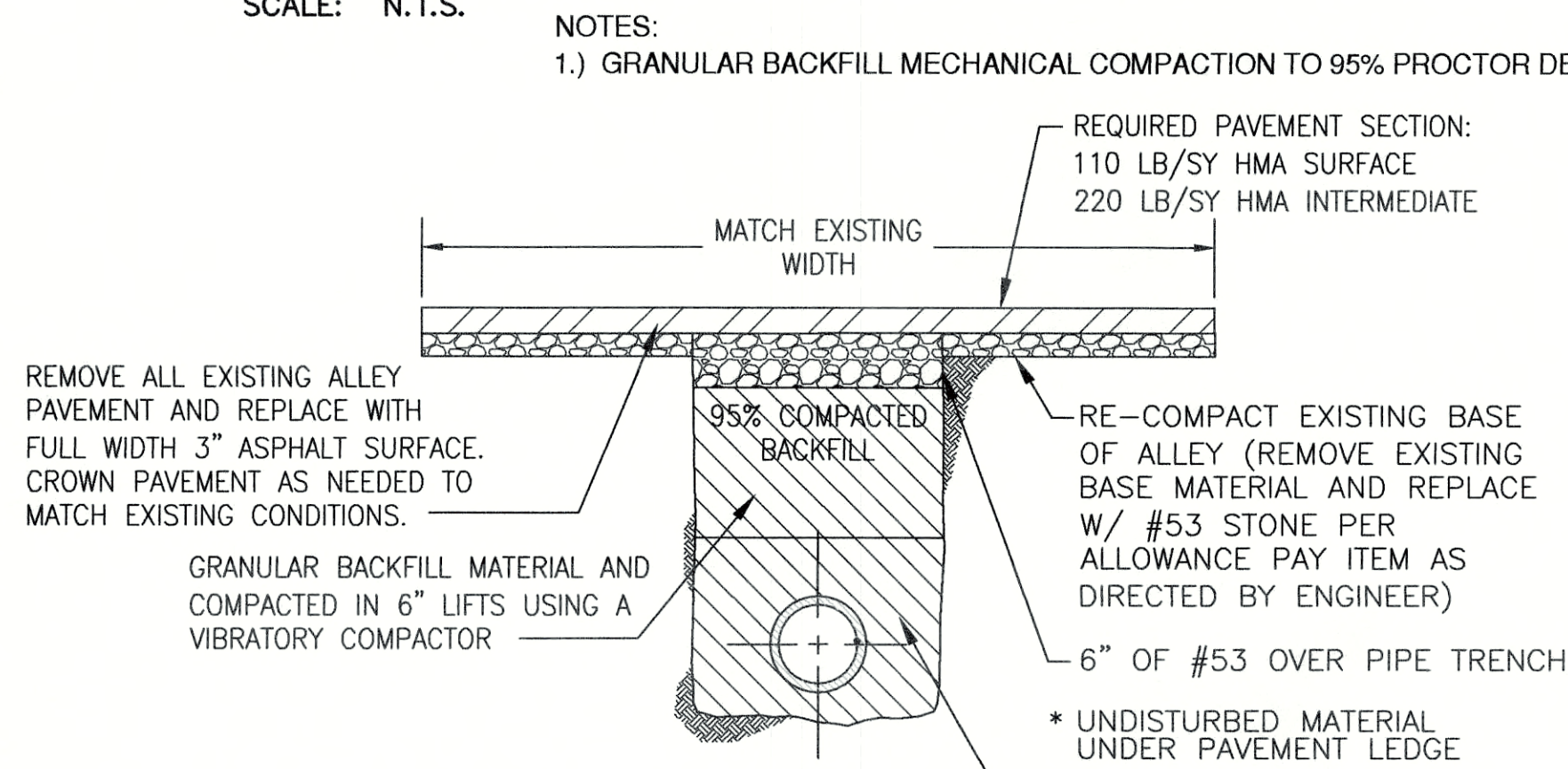


**TYPE I - LANDSCAPE CLEANOUT DETAIL**  
SCALE: N.T.S.

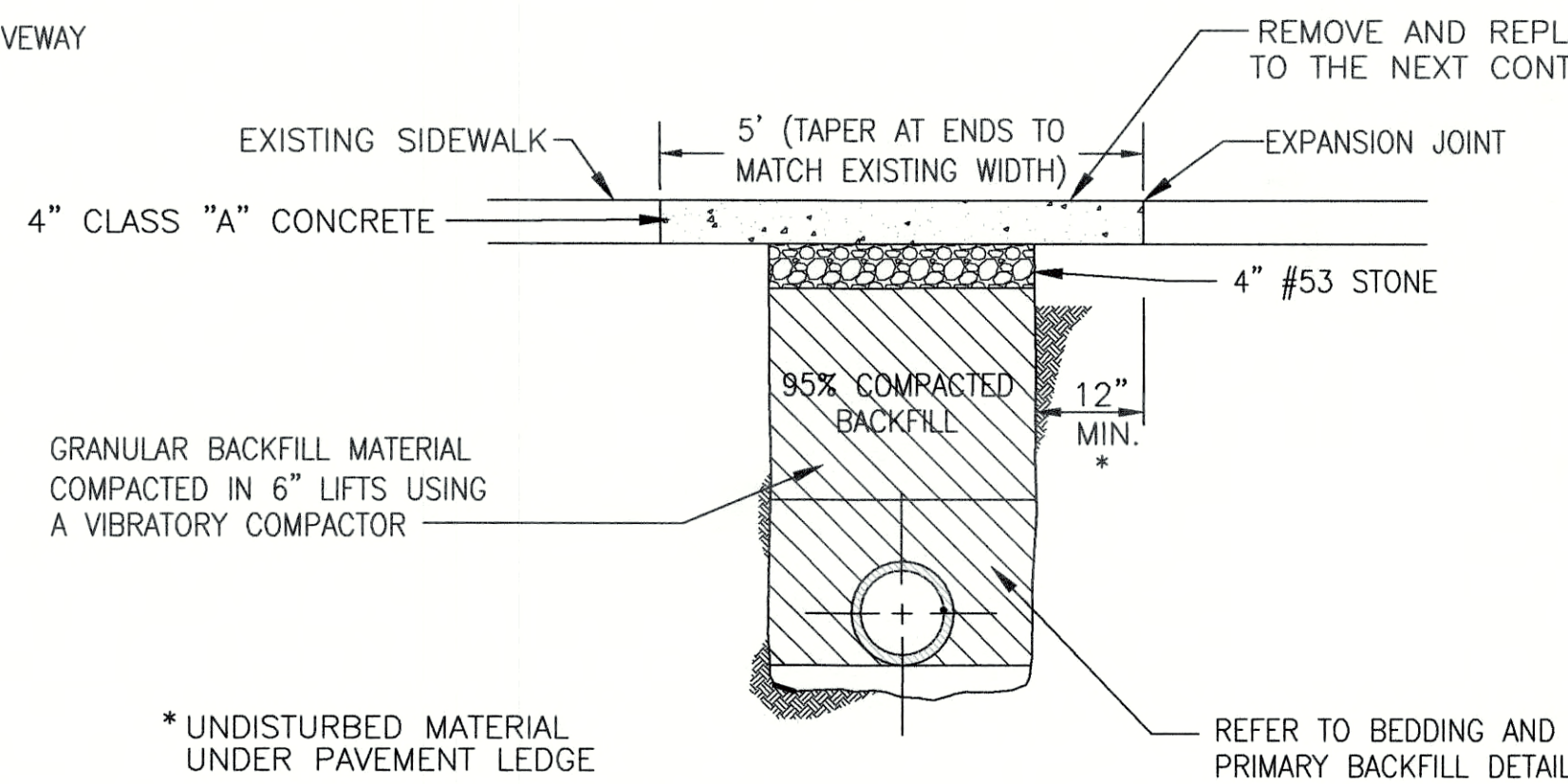
NOTE:  
FOR PRIVATE LATERAL REPLACEMENTS, CLEANOUT SHALL BE  
WITHIN 5 FT. OF THE HOME AND EVERY 100 FT.



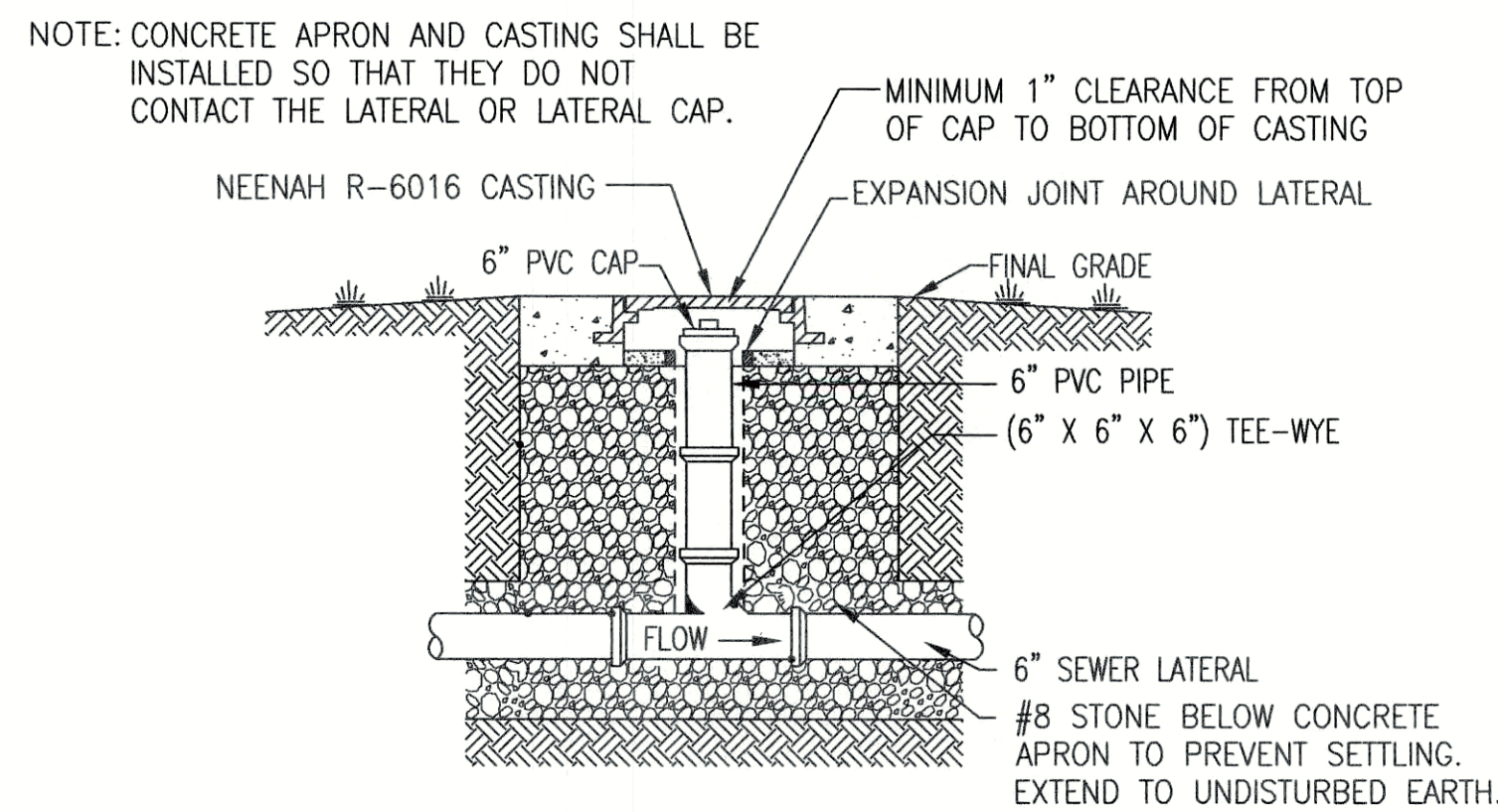
**GRAVEL DRIVEWAYS - METHOD "B"**  
SCALE: N.T.S.



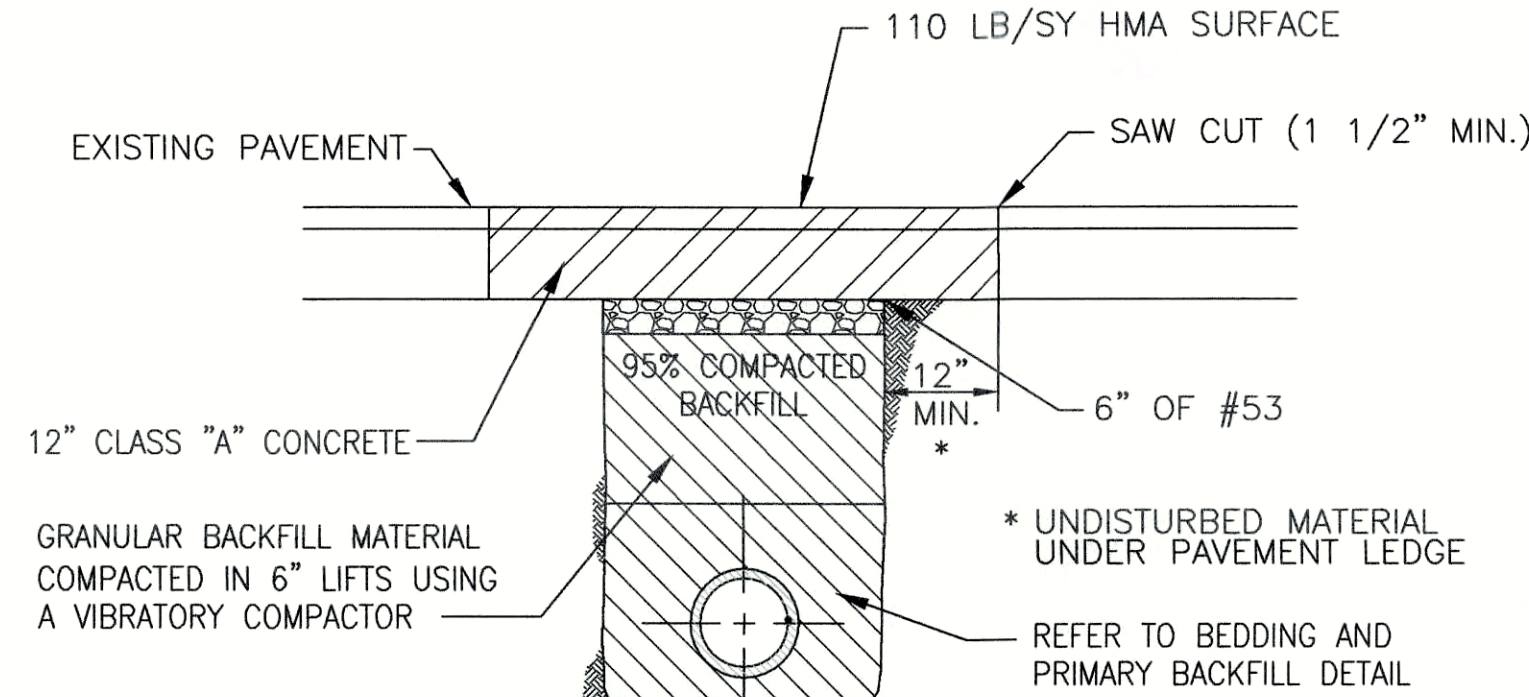
**PAVED ALLEY FULL WIDTH RESURFACING - METHOD "C2"**  
SCALE: N.T.S.



**CONCRETE SIDEWALKS - METHOD "D2"**  
SCALE: N.T.S.

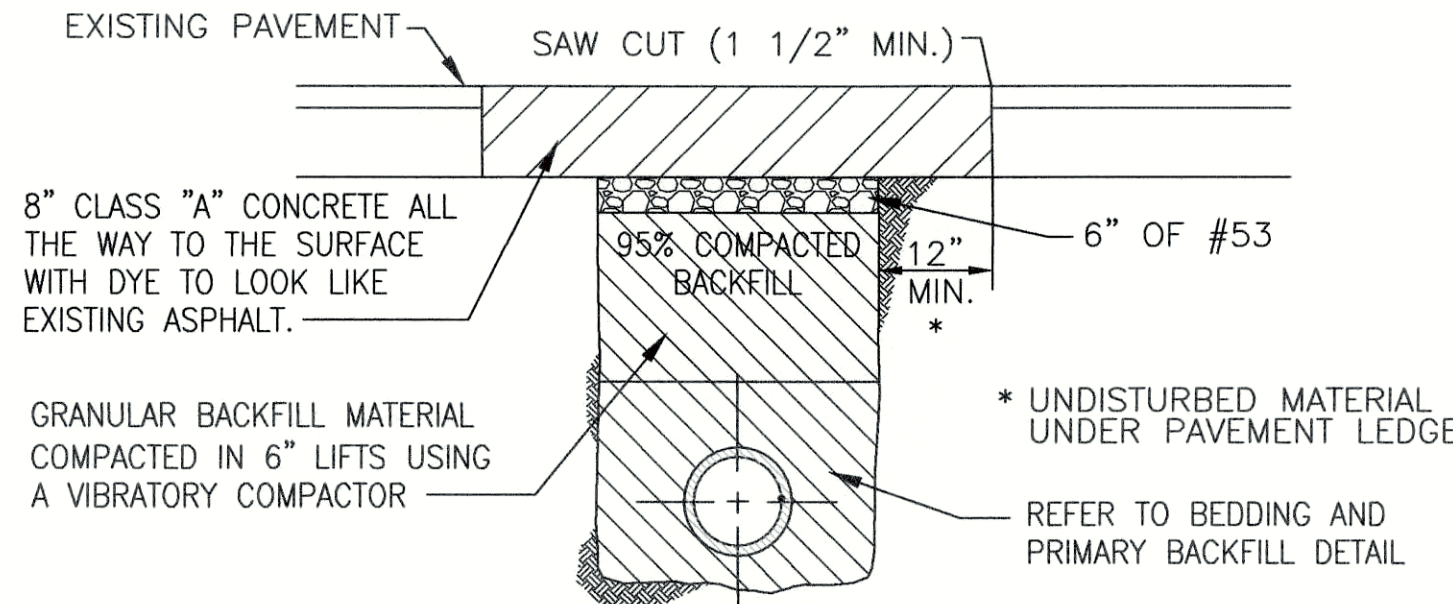


**TYPE II - HARDSCAPE CLEANOUT DETAIL**  
SCALE: N.T.S.

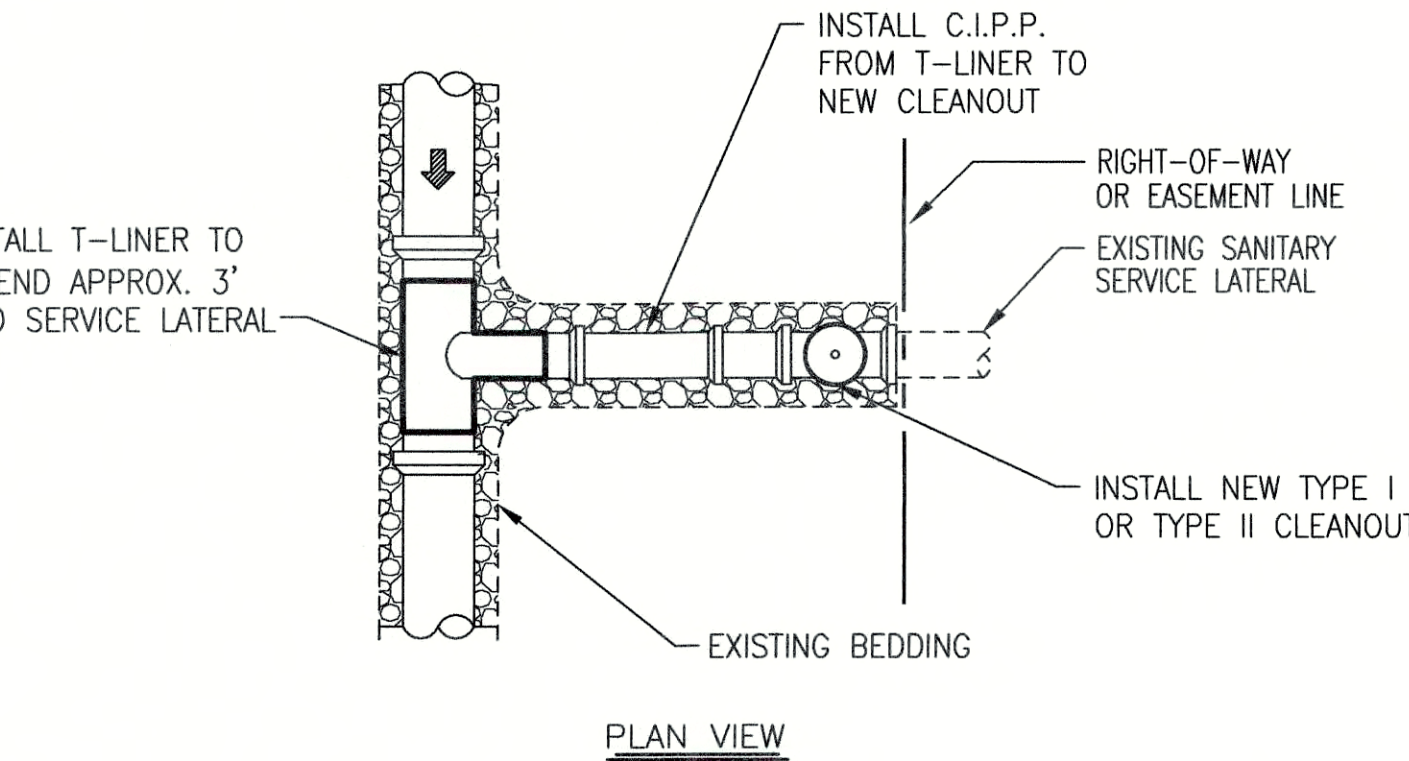
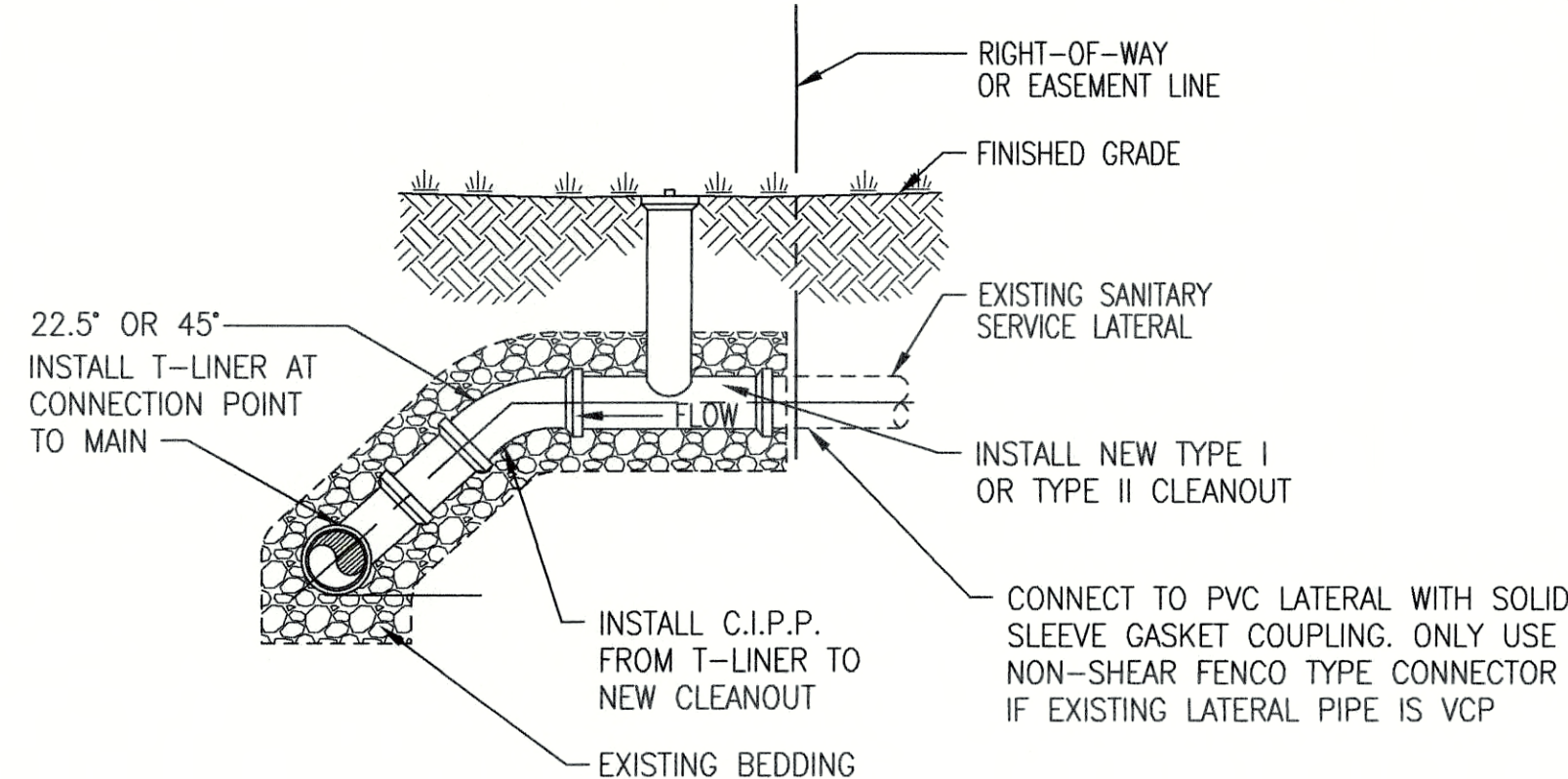


**PRIMARY ROADWAY PATCHING - METHOD "C"**  
SCALE: N.T.S.

\* TO BE USED ON PENDELETON AVENUE AND STATE STREET

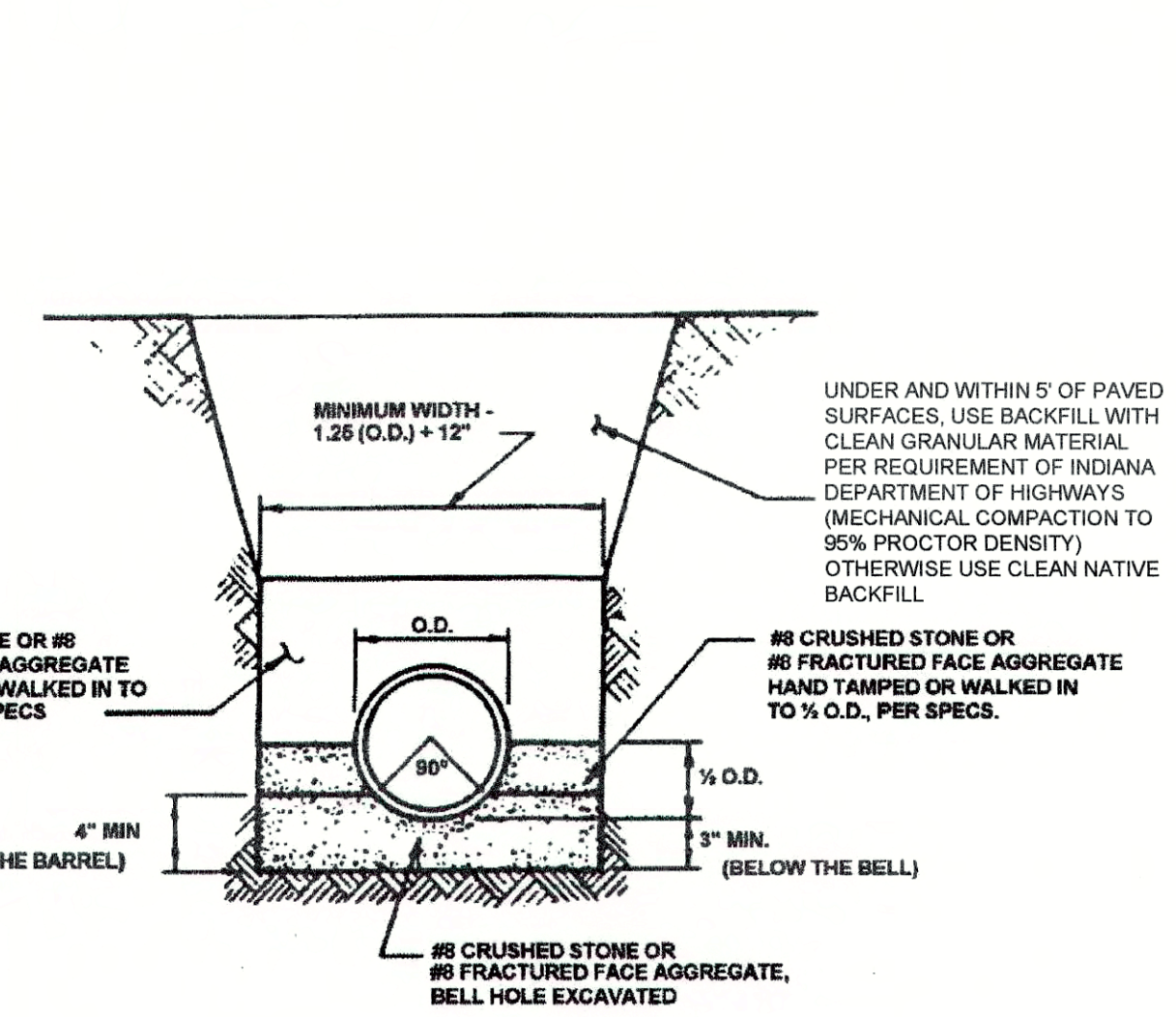


**SECONDARY ROADWAY AND ALLEY PATCHING - METHOD "C1"**  
SCALE: N.T.S.



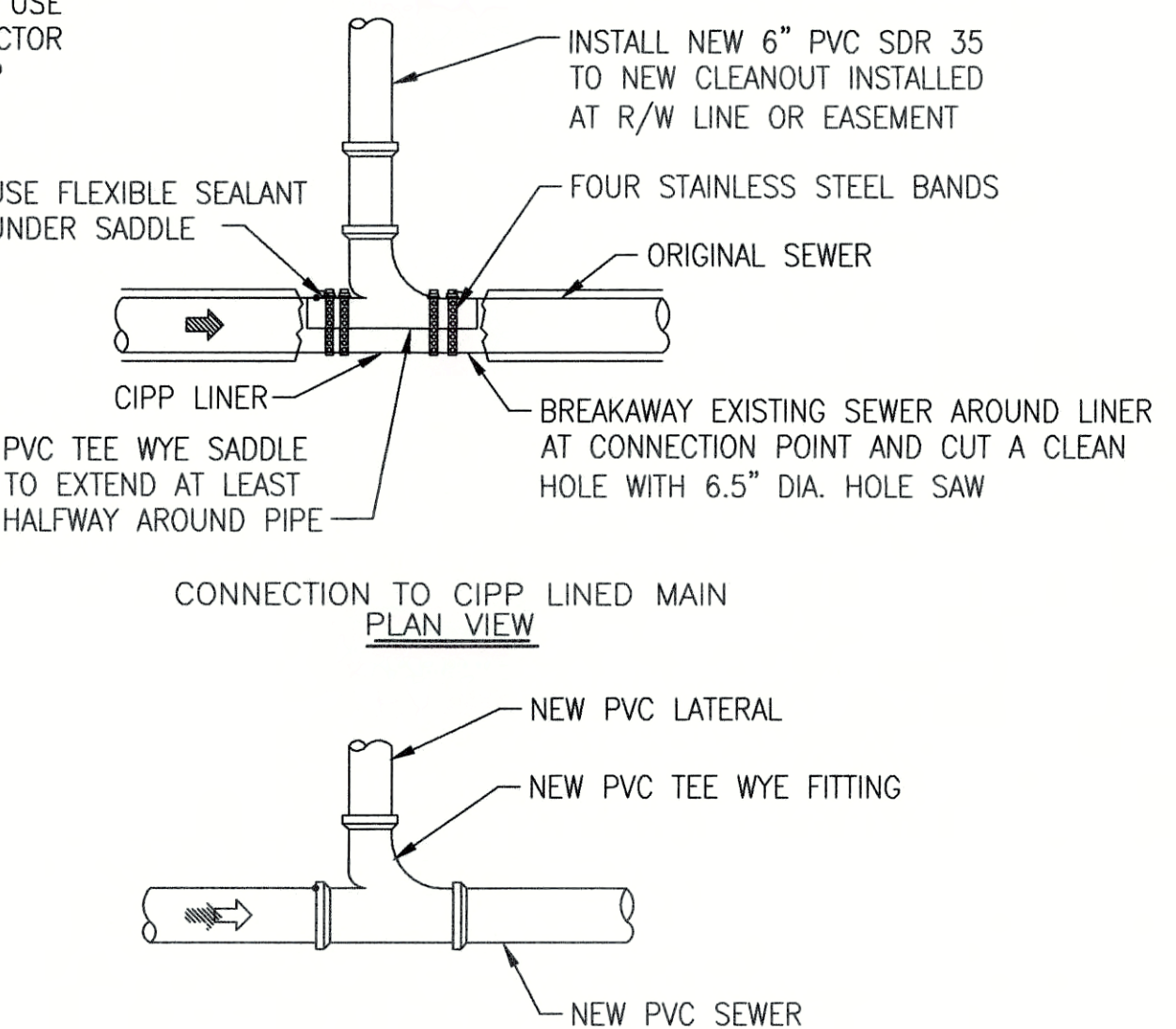
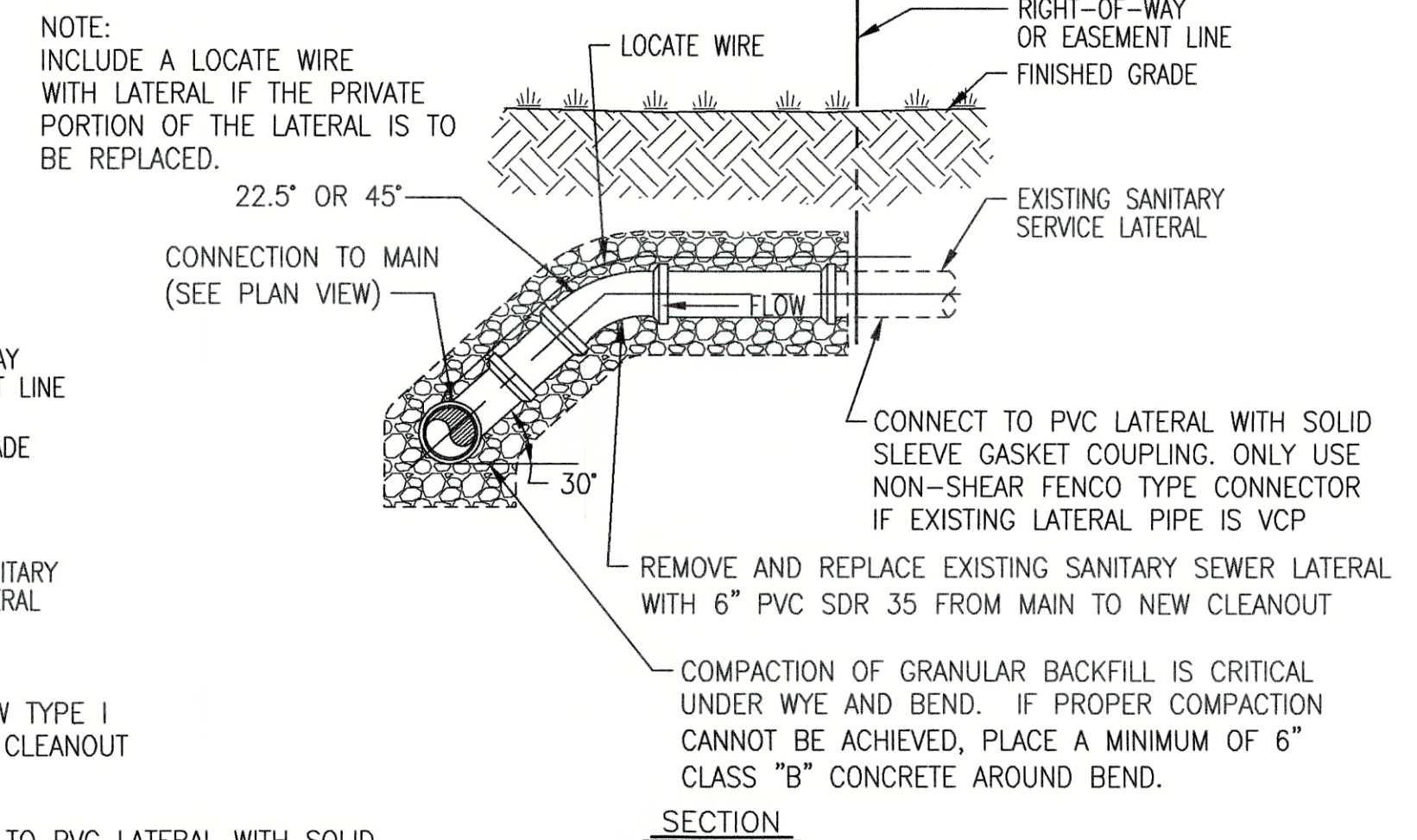
**CIPP SERVICE LATERAL LINING DETAILS**  
SCALE: N.T.S.

NOTE:  
SADDLE CONNECTIONS FOR MAINS TO  
BE CIPP LINED MUST BE DONE AFTER  
CIPP LINING OF MAIN IS COMPLETE.

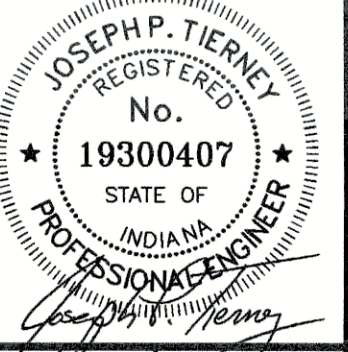


**FLEXIBLE PIPE BEDDING AND PRIMARY BACKFILL DETAIL - PVC AND HDPE PIPE**  
SCALE: N.T.S.

PIPE SIZE	8" TO 16"	18" & OVER
BEDDING BELOW THE PIPE BARREL	O.D. 14 MIN. = 4"	O.D. 14 MAX. = 8"



**DIG AND REPLACE SERVICE LATERAL DETAILS**  
SCALE: N.T.S.



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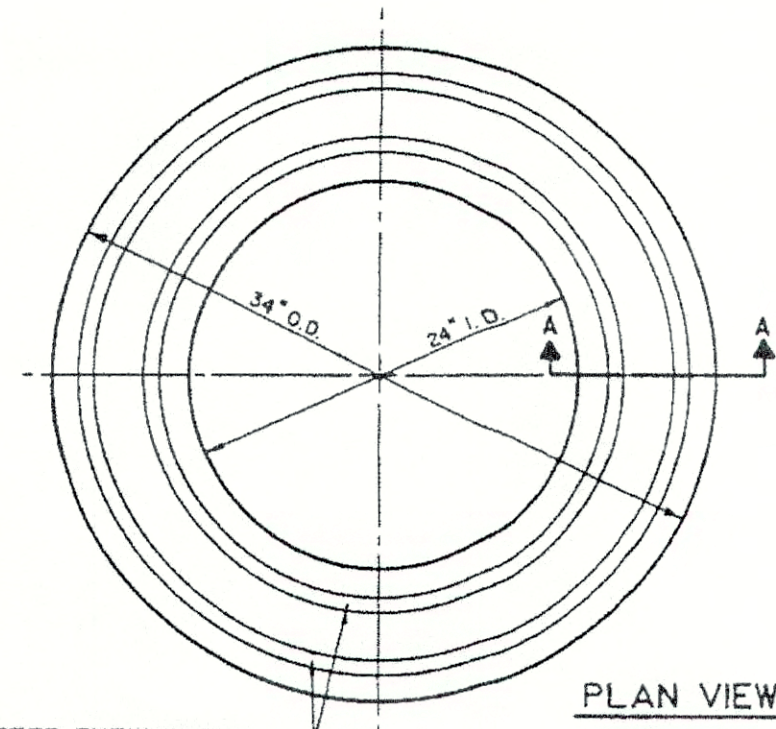
**STANDARD DETAILS**  
**SANITARY SEWER REHABILITATION**  
**SEWER REHABILITATION PROJECT PHASE II**  
**TOWN OF PENDELETON, INDIANA**

DESIGNED	GWL	DRAWN	GCR	REVIEWED	JPT	APPROVED	JPT
DATE	DATE	DATE	DATE	DATE	DATE	DATE	DATE
DESCRIPTION	DESCRIPTION	DESCRIPTION	DESCRIPTION	DESCRIPTION	DESCRIPTION	DESCRIPTION	DESCRIPTION

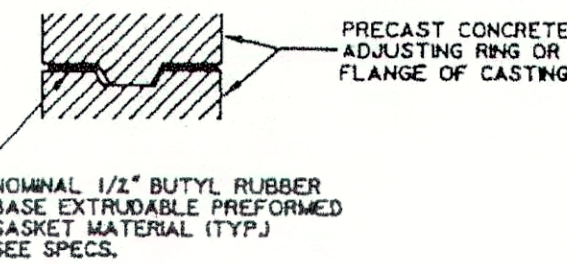
DATE: **MARCH 2017**  
SCALE: **N.T.S.**  
SHEET NO. **C-44**



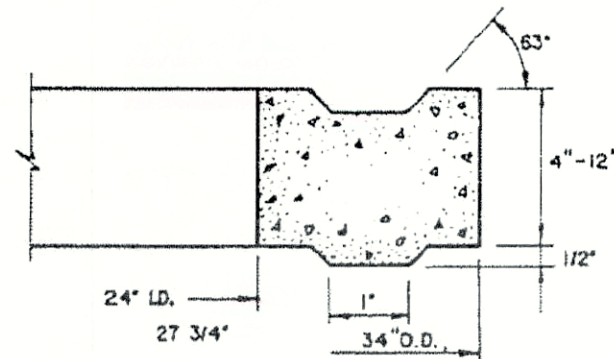
PLACE 1/2" DIAMETER EXTRUDABLE PREFORMED GASKET MATERIAL IN EACH KEYWAY (SEE DETAIL 1).



PLAN VIEW



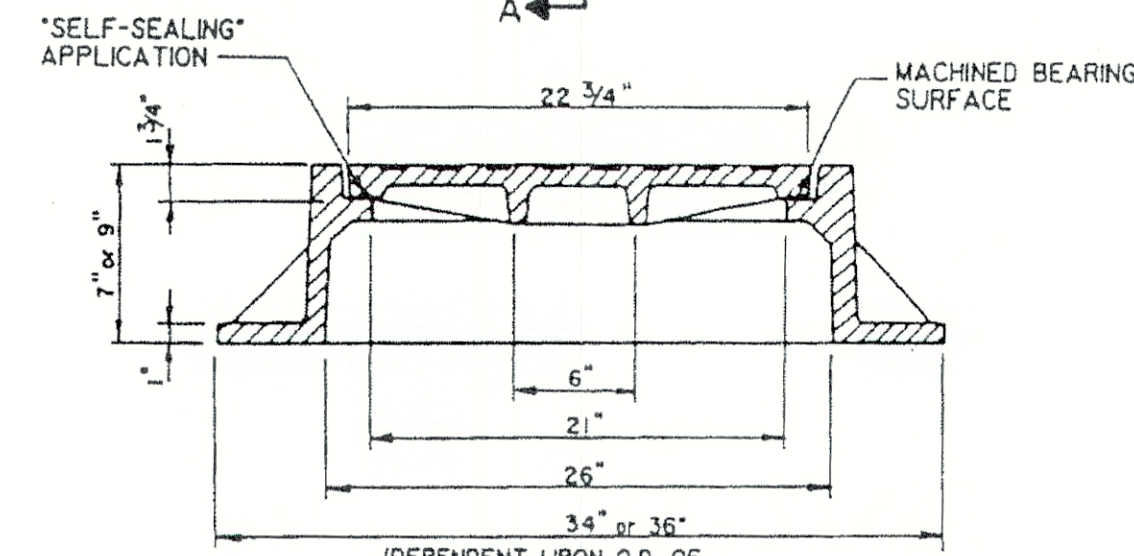
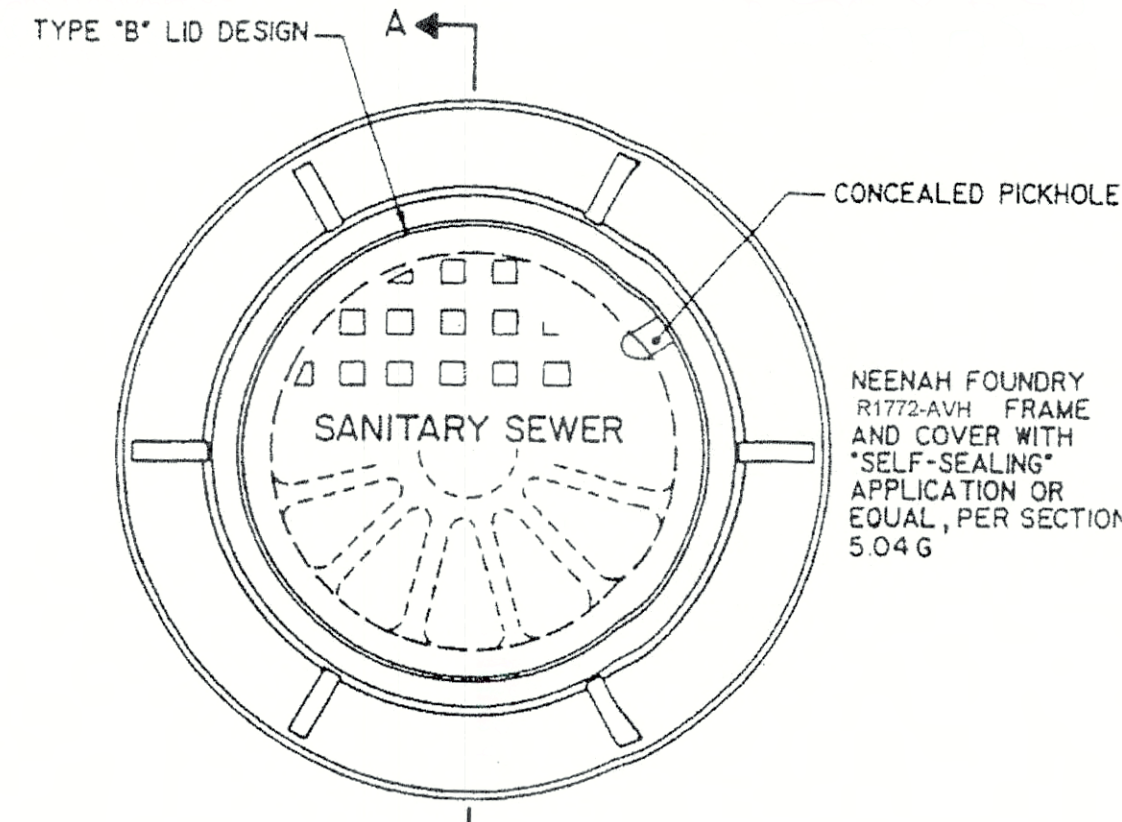
GASKET DETAIL



SECTION 'A-A'

### ADJUSTING RING

FIGURE 5-48



SECTION 'A-A'

### SANITARY SEWER MANHOLE FRAME & COVER - STANDARD MANHOLE

FIGURE 5-7

NOTES:  
PROVIDE ADEQUATE DEPTH OF BEDDING TO SUPPORT BOTTOM QUADRANT OF PIPE.

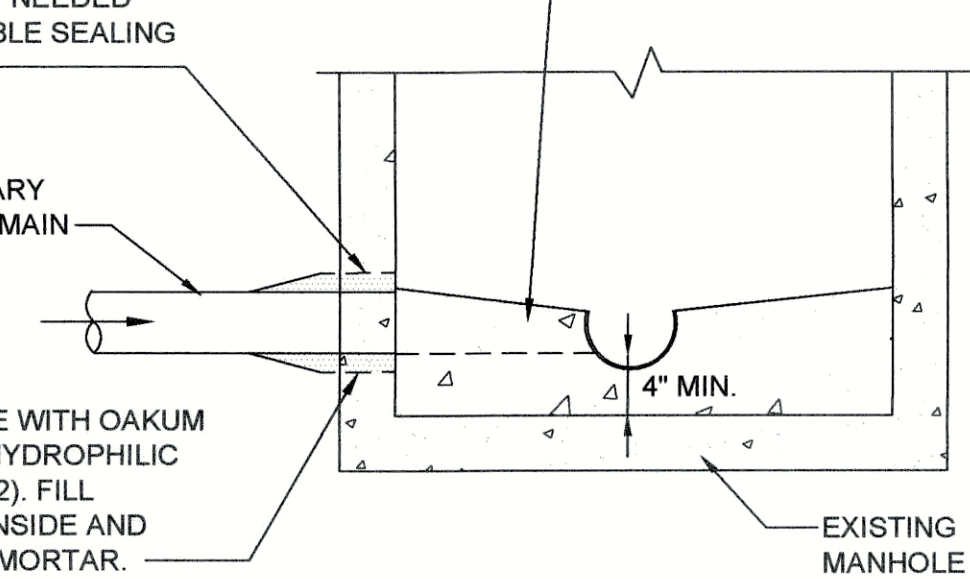
\* DEPTH OF COVER MAY BE REDUCED TO A MINIMUM OF 48" IF ROCK IS ENCOUNTERED WHEN EXCAVATING TRENCH.

### WATER MAIN TRENCH DETAIL - IN PAVED AREA

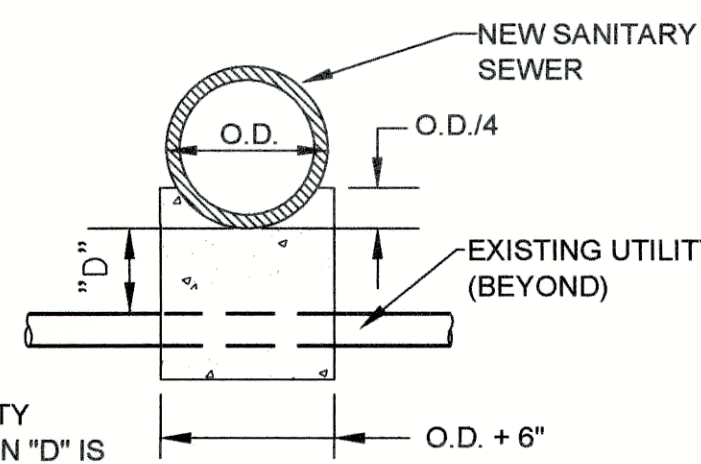
REMOVE EXISTING PIPE AND ALL GROUT BACK TO ORIGINAL SMOOTH PIPE OPENING IN PRECAST STRUCTURE. USE REPAIR MORTAR IF NEEDED TO CREATE SUITABLE SEALING SURFACE.

SEAL AROUND PIPE WITH OAKUM BAND SOAKED IN HYDROPHILIC GROUT (AVANTI 202). FILL ANNULAR SPACE INSIDE AND OUT WITH REPAIR MORTAR.

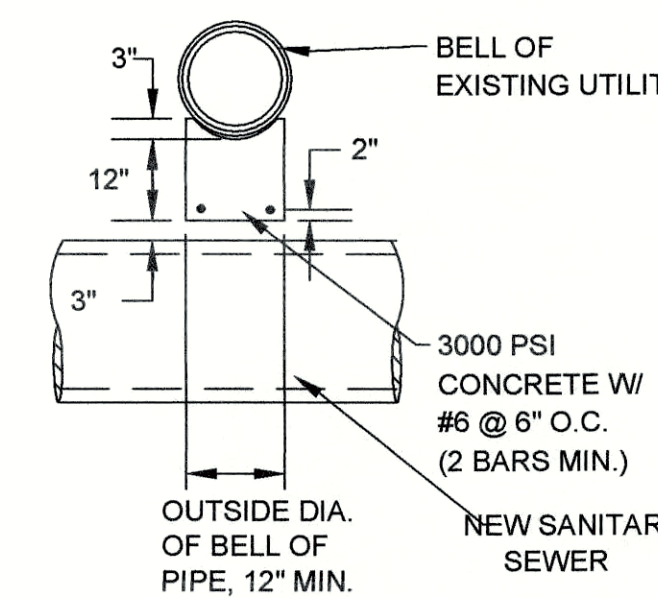
RECONSTRUCT BENCH WALLS AS NEEDED (NOTE: SHAPE TO FORM SMOOTH FLOW CHANNEL POURED UP TO CROWN OF PIPE)



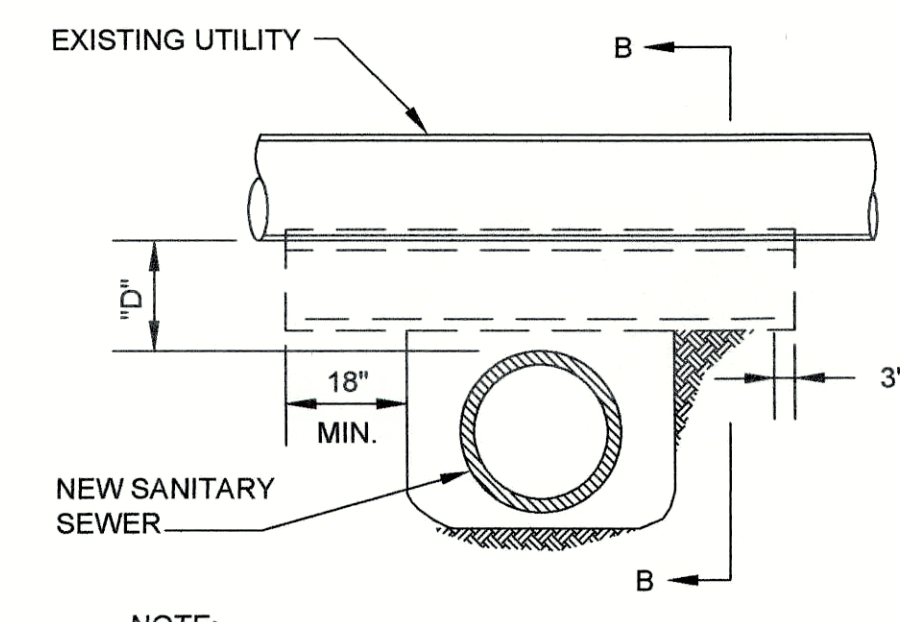
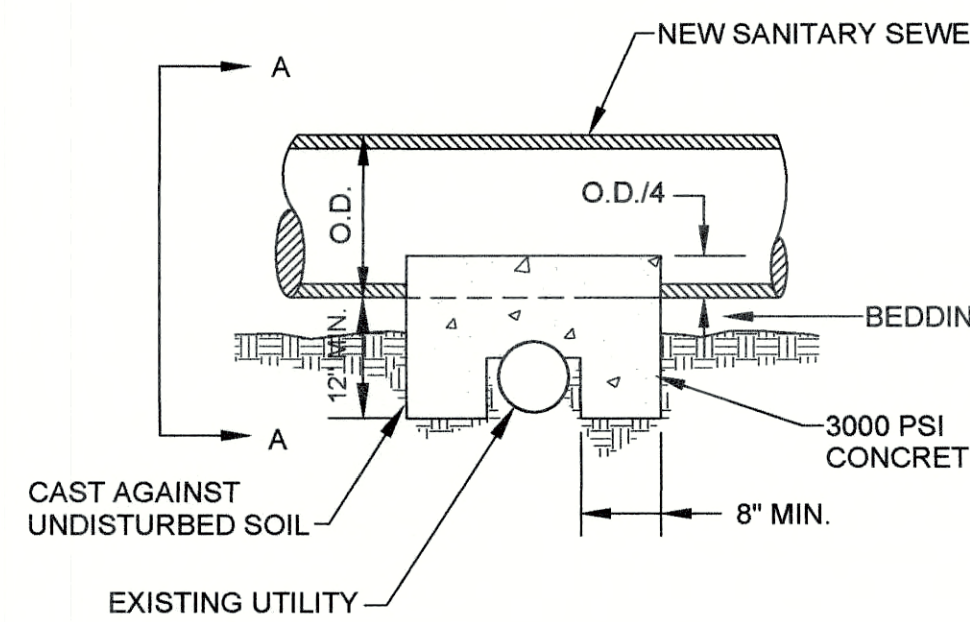
### EXISTING MANHOLE CONNECTION DETAIL



SECTION A-A



SECTION B-B

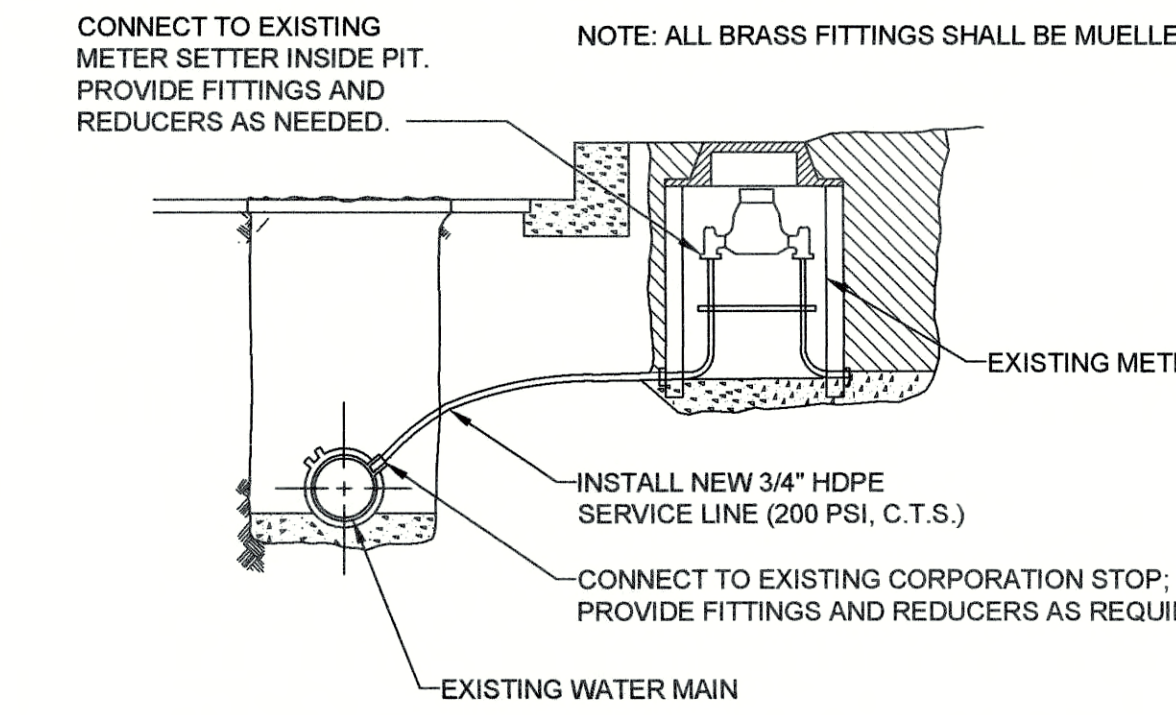


NOTE: EXISTING UTILITIES SHALL MEAN: STEEL GAS MAINS, ELECTRIC/TELEPHONE CONDUITS, FIBER OPTIC BANKS, STORM SEWER PIPING, WATER MAIN PIPING, ETC..

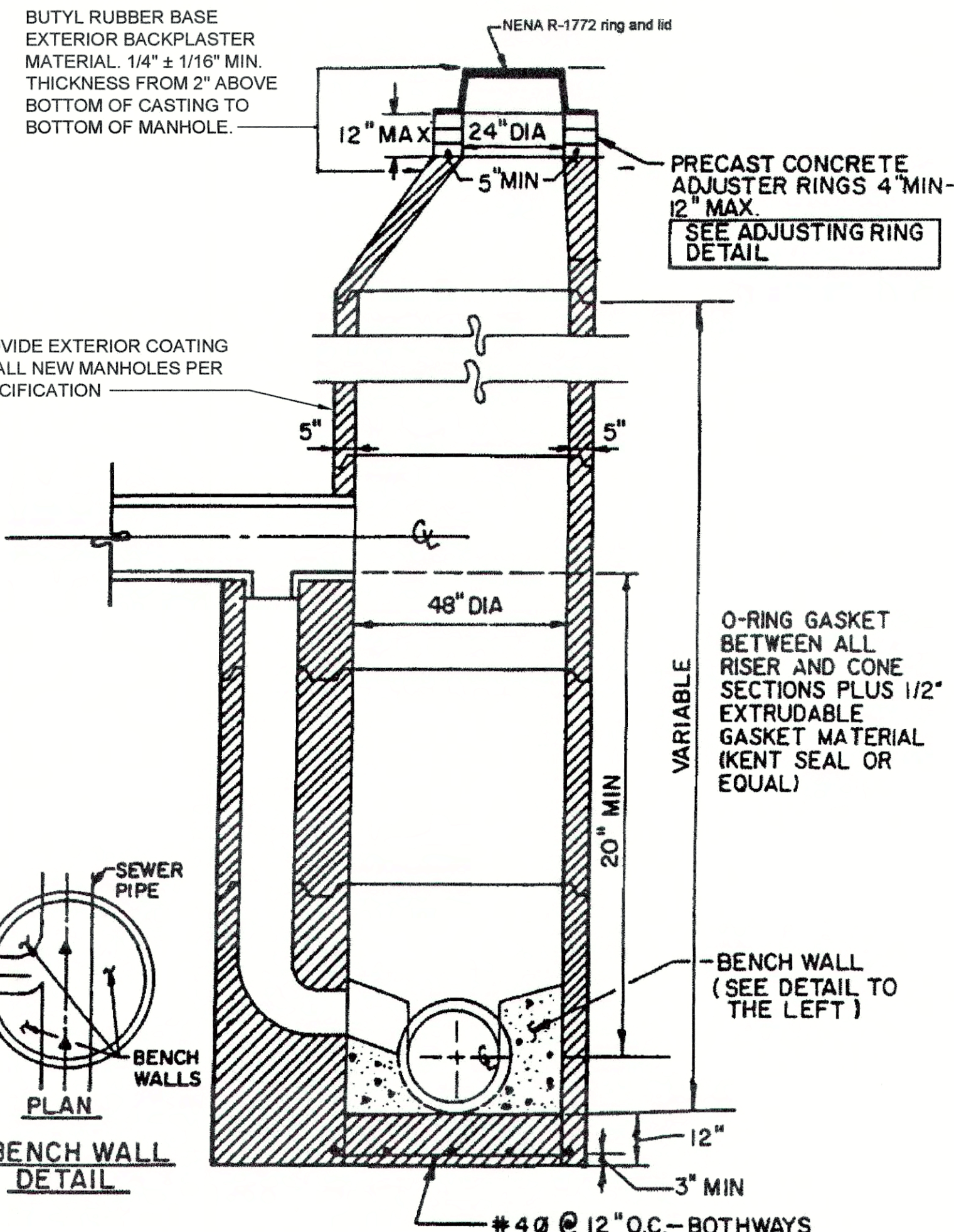
### CONCRETE CRADLE - DETAILS

### SEWER POINT REPAIR NOTES (IF REQUIRED & APPROVED BY OWNER):

1. PRIOR TO CIPP INSTALLATION, CONTRACTOR SHALL PERFORM DIG-UP & REPLACE POINT REPAIR WITH NEW PVC SDR-35 PIPE CONFORMING TO A.S.T.M. D3034 WITH A.S.T.M. 3212 BELL AND SPIGOT RUBBER GASKETED JOINTS. POINT REPAIR SHALL EXTEND A MINIMUM OF ONE FULL PIPE JOINT BEYOND EITHER SIDE OF REPAIR LOCATION, NOT TO EXCEED 10FT. TOTAL LENGTH. JOIN NEW PIPE SECTION WITH EXISTING PIPE USING NON-SHEAR TYPE FERNCO COMPRESSION COUPLINGS, OR EQUAL, MEETING THE REQUIREMENTS OF A.S.T.M. C425 AND SUITABLE FOR THE SERVICE IN WHICH IT IS INTENDED. BANDS SHALL BE SERIES 300 STAINLESS STEEL CONFORMING TO A.S.T.M. A240.
2. REFER TO DETAILS ON SHEET C-44 FOR PIPE BEDDING, BACKFILL, AND SURFACE RESTORATION REQUIREMENTS.
3. SHOULD SEWER POINT REPAIR VARY SIGNIFICANTLY FROM DESCRIPTION ABOVE, ITEM SHALL BE NEGOTIATED THROUGH THE CHANGE ORDER PROCESS.



### WATER SERVICE LINE REPLACEMENT



### STANDARD DROP MANHOLE

### STANDARD MANHOLE FOR PIPE SIZES 8" - 24" (STRAIGHT THRU)

FIGURE 5-1

GRW PROJECT NO. 4447-24

SRF NO. WW16074803

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## STANDARD DETAILS

### SANITARY SEWER REHABILITATION

#### SEWER REHABILITATION PROJECT PHASE II

#### TOWN OF PENDLETON, INDIANA

DESIGNED		GWL		GCR		JPT		JPT	
		BY	DATE	BY	DATE	BY	DATE	BY	DATE
REVISIONS									
NO.	DESCRIPTION								

DATE: MARCH 2017

SCALE: N.T.S.

SHEET NO. C-45

THIS MARK SHOULD MEASURE EXACTLY 1" WHEN PLOTTED



FILE NAME: G:\4447-FRWD-2015\Working Drawings\AutoCAD\REHABILITATION PHASE II\4447-24-C-46-Erosion.dwg  
PRINTED: 3/11/2017 @ 3:54PM

## EROSION CONTROL NOTES

DURING ALL PHASES OF CONSTRUCTION THE SITE GENERAL CONTRACTOR AND ALL SUB-CONTRACTORS SHALL EXERCISE MEASURES TO PREVENT THE EROSION OF SOILS DUE TO THE ACTION OF WATER AND WIND. THE CONTRACTORS SHALL USE THE FOLLOWING MEASURES TO ACCOMPLISH THIS OBJECTIVE:

### A. SURFACE PROTECTION

- CLEARING SHALL BE LIMITED SO AS TO EXPOSE THE SMALLEST POSSIBLE AREA OF LAND FOR THE SHORTEST POSSIBLE TIME.
- EXPOSED AREAS SHALL BE IMMEDIATELY GRADED AND PROTECTED WITH TEMPORARY OR PERMANENT COVER, SUCH AS SOD, SEED AND MULCH, CROWN VETCH, LESPEDEZA OR CREEPER. NEWLY GRADED CHANNELS OR STEEP SLOPES WILL REQUIRE THE USE OF FIBROUS MATTING, NETTING OF SEEDS AND MULCHED AREAS, OR THE STAKING OR SHINGLING OF SOD WHILE VEGETATION IS BECOMING ESTABLISHED.

### B. RUN-OFF CONTROL

- LONG AND/OR STEEP SLOPES WILL REQUIRE CONTOUR AND FURROWING, OR BERMS TO REDUCE RUN-OFF VELOCITIES.

### C. SEDIMENT TRAPPING

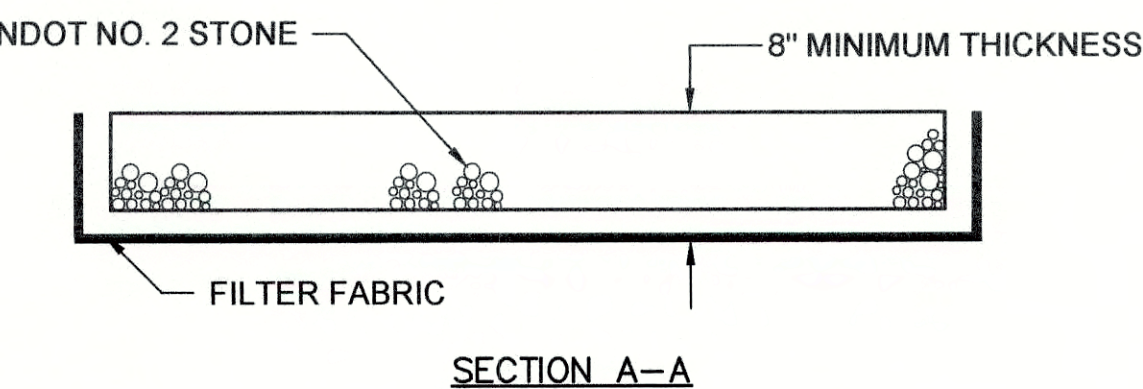
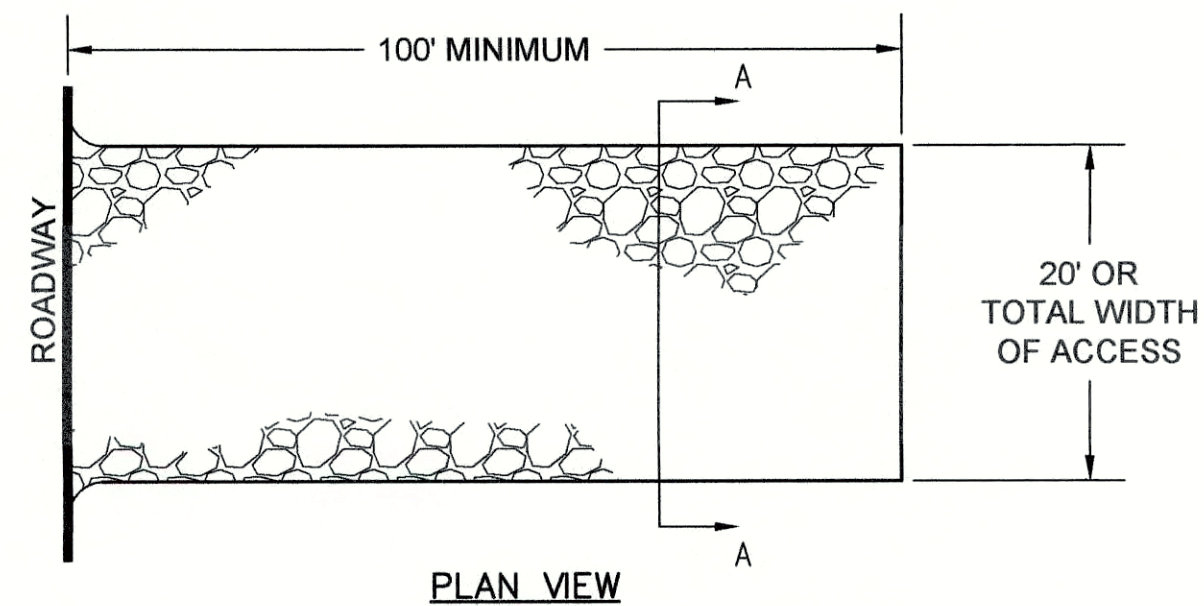
- THE TRAPPING OF ERODED PARTICLES WILL BE ACCOMPLISHED BY THE DIVERSION OF RUN-OFF TO SEDIMENT BASINS, EXCAVATION TRAPS, BERMS, STAKED HAY BALES, OR FLOATING SILT CURTAINS.
- THE PROPOSED RETENTION AND/OR DETENTION POND(S) ALONG WITH ANY ENVIRONMENTAL BERM(S)/REAR YARD SWALE(S) SHALL BE CONSTRUCTED FIRST. THE POND(S) AND OUTFALL STRUCTURE(S) MUST BE COMPLETE AND OPERATIONAL PRIOR TO THE PLACEMENT OF ANY IMPERVIOUS SURFACE.
- TRAPPING DEVICES SHALL BE PERIODICALLY INSPECTED DURING DRY PERIODS AND AFTER EACH RAINFALL EVENT BY THE SITE CONTRACTOR. TRAPPING DEVICES SHALL BE REPLACED IF DETERMINED TO BE INCAPABLE OF PERFORMING INTENDED FUNCTION OF SEDIMENT TRAPPING.
- TRAPPING DEVICES SHALL REMAIN IN PLACE UNTIL A VEGETATIVE COVER HAS ESTABLISHED SUFFICIENTLY TO STABILIZE THE SOILS AND PREVENT EROSION.

### D. SOIL MOISTURE

- THE CONTRACTOR SHALL HAVE AVAILABLE ON THE CONSTRUCTION SITE A WATER SOURCE CAPABLE OF APPLYING WATER TO DRY EXPOSED SOIL IN ORDER TO PREVENT WIND EROSION. THE APPLICATION RATE AND MANNER SHALL BE SUCH THAT SOIL MOISTURE IS ATTAINED AND NO SURFACE RUN-OFF IS CREATED.

### E. RESPONSIBILITY

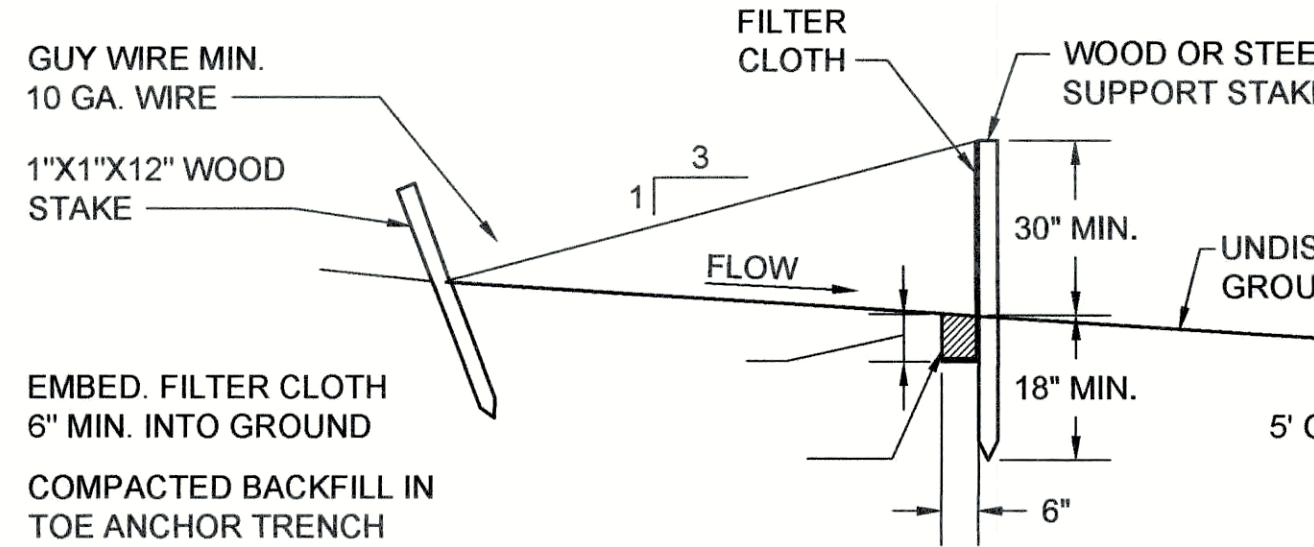
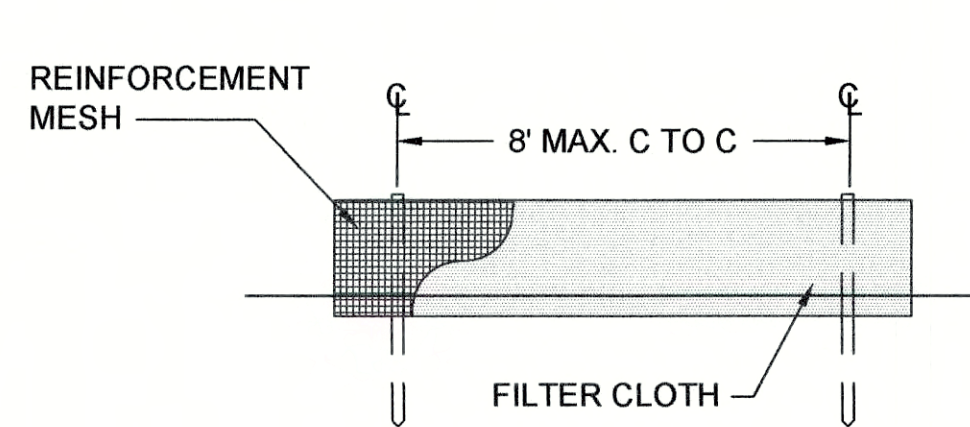
- THE CONTRACTOR SHALL BE HELD RESPONSIBLE UNTIL THE CERTIFICATE OF COMPLETION IS ISSUED. AFTER THAT, THE OWNER WILL BE RESPONSIBLE FOR MAINTENANCE OF THE STORMWATER COLLECTION AND DETENTION SYSTEM.



MAINTENANCE: THE STABILIZED CONSTRUCTION ENTRANCE SHALL BE INSTALLED WHERE SHOWN ON THE PLAN. THE ENTRANCE SHALL BE INSPECTED WEEKLY AND ADDITIONAL INDOT NO. 2 STONE SHALL BE KEPT ON SITE SO THAT THE MINIMUM DIMENSIONS CAN BE MAINTAINED THROUGHOUT THE PROJECT. SEDIMENT TRACKED ONTO A PUBLIC ROADWAY SHALL BE REMOVED AT THE END OF EACH CONSTRUCTION DAY AND PLACED ON THE TOPSOIL STOCKPILE. NO OTHER ENTRANCE SHALL BE USED TO GAIN ACCESS TO THE SITE BY ANY CONSTRUCTION, PERSONAL OR DELIVERY VEHICLES.

## ROCK CONSTRUCTION ENTRANCE

NOT TO SCALE

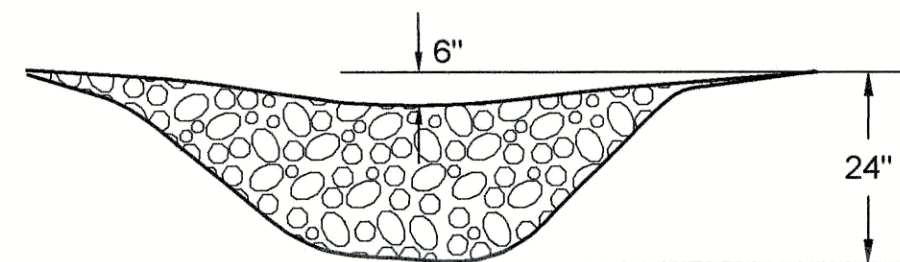


NOTE: MAXIMUM FENCE HEIGHT = 36". MESH CAN BE EITHER INDUSTRIAL POLYPROPYLENE OR STEEL MESH WITH MAXIMUM 6" OPENING. USE MINIMUM 14 GA. WIRE.

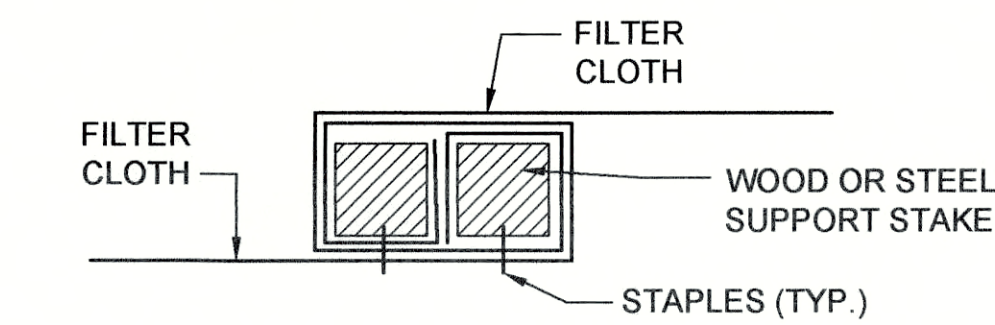
FF-30 FILTER FABRIC FENCE

## DETAILS - FILTER FABRIC FENCE

NOT TO SCALE

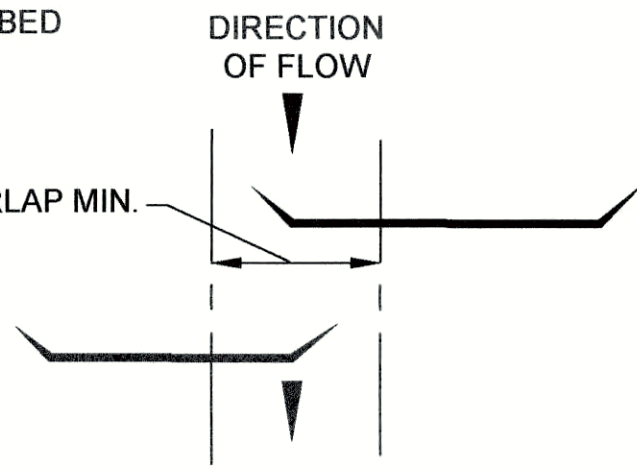


ROCK CHECK DAM

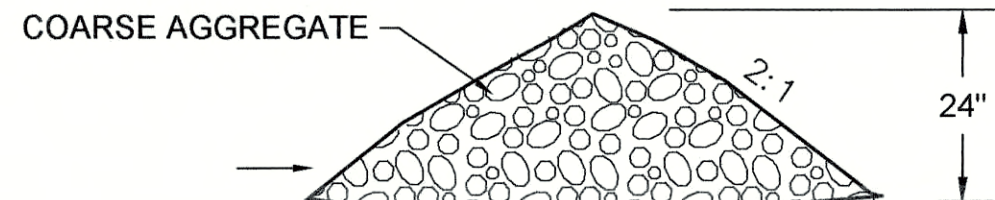


NOTE: FILTER CLOTH TO BE SPUN AROUND STAKES AND STAPLED AS SHOWN AT ALL FENCE OR MATERIAL SPLICES

JOINING FENCE SECTIONS

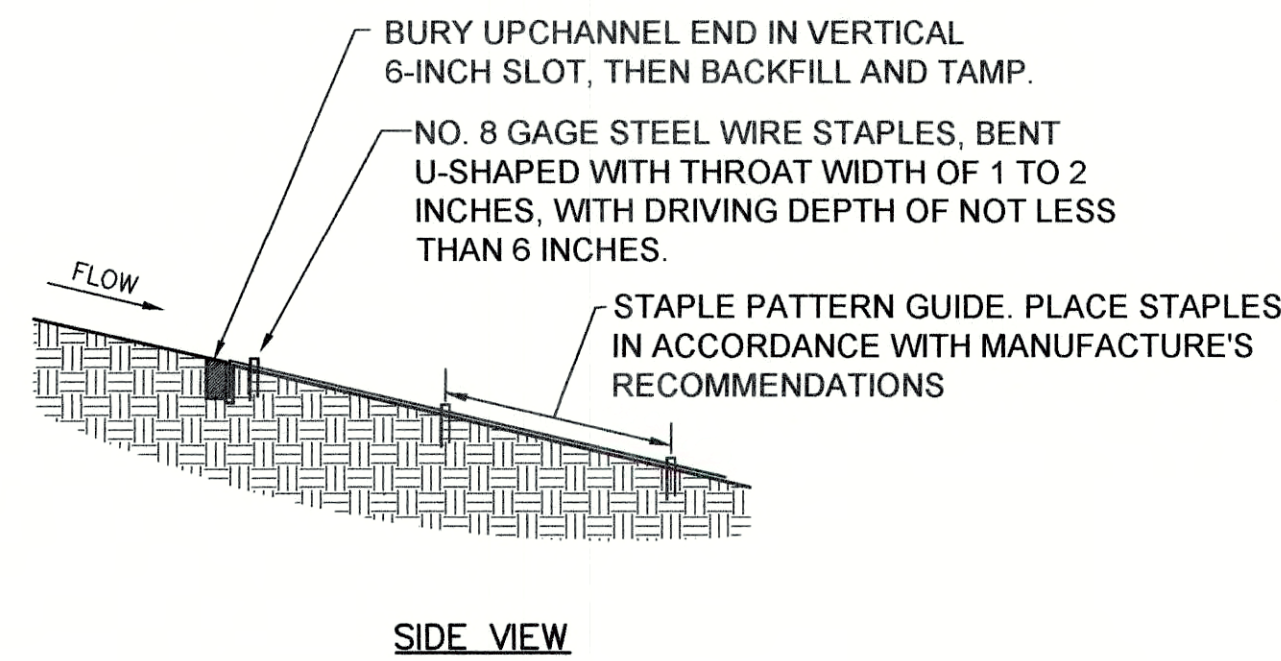


STAGGERED FENCE DETAIL

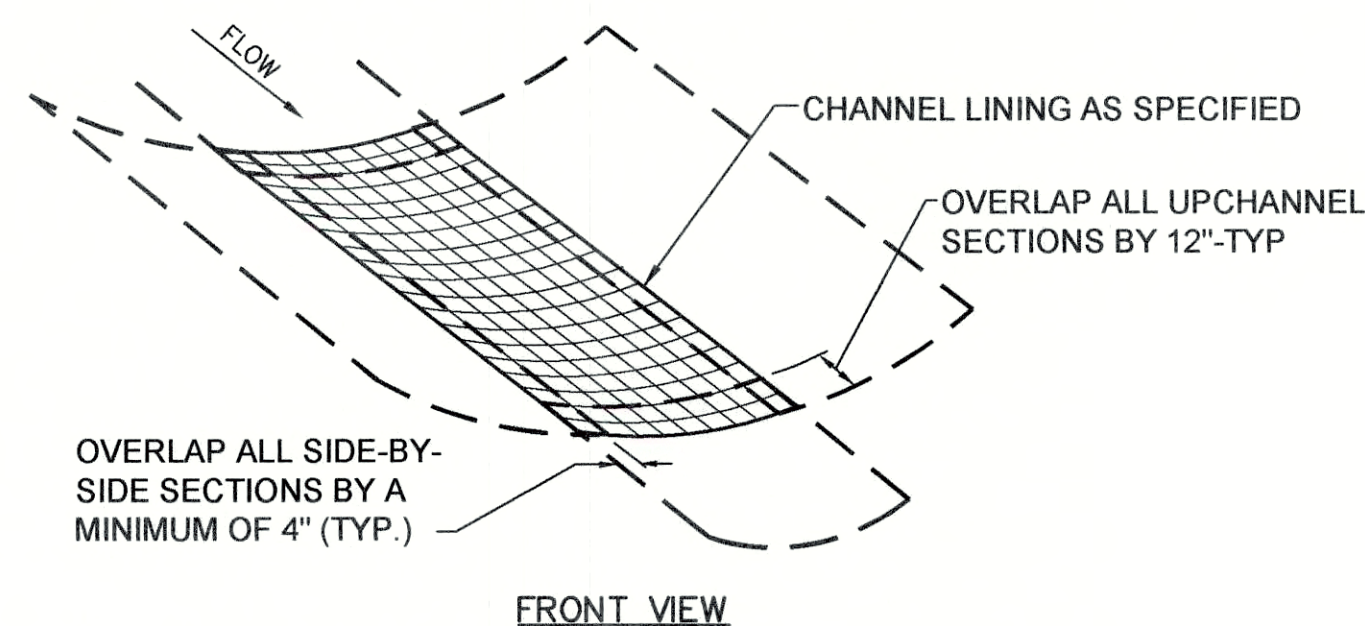


## DETAILS - CHECK DAM

NOT TO SCALE



SIDE VIEW

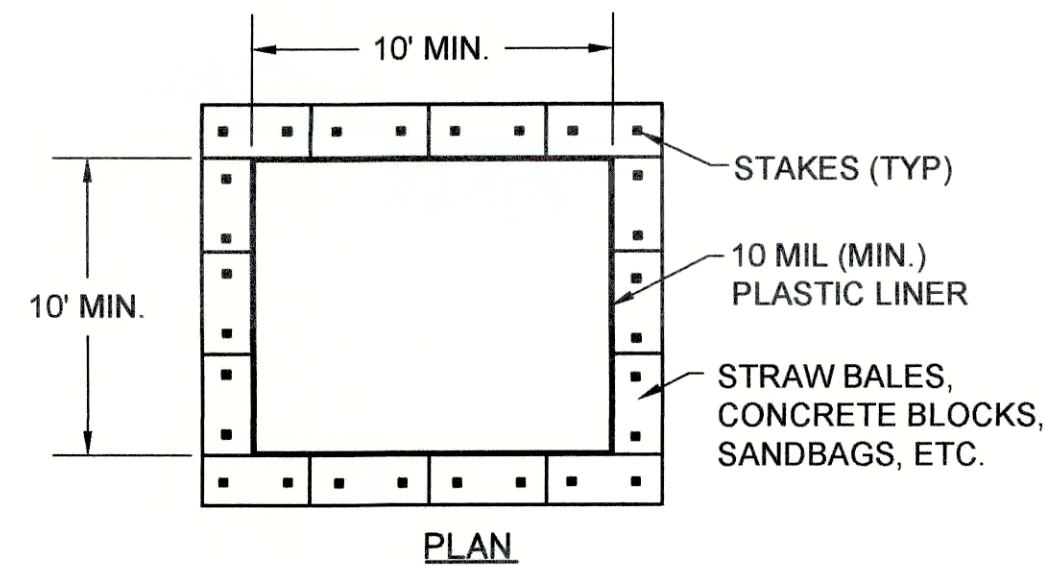


FRONT VIEW

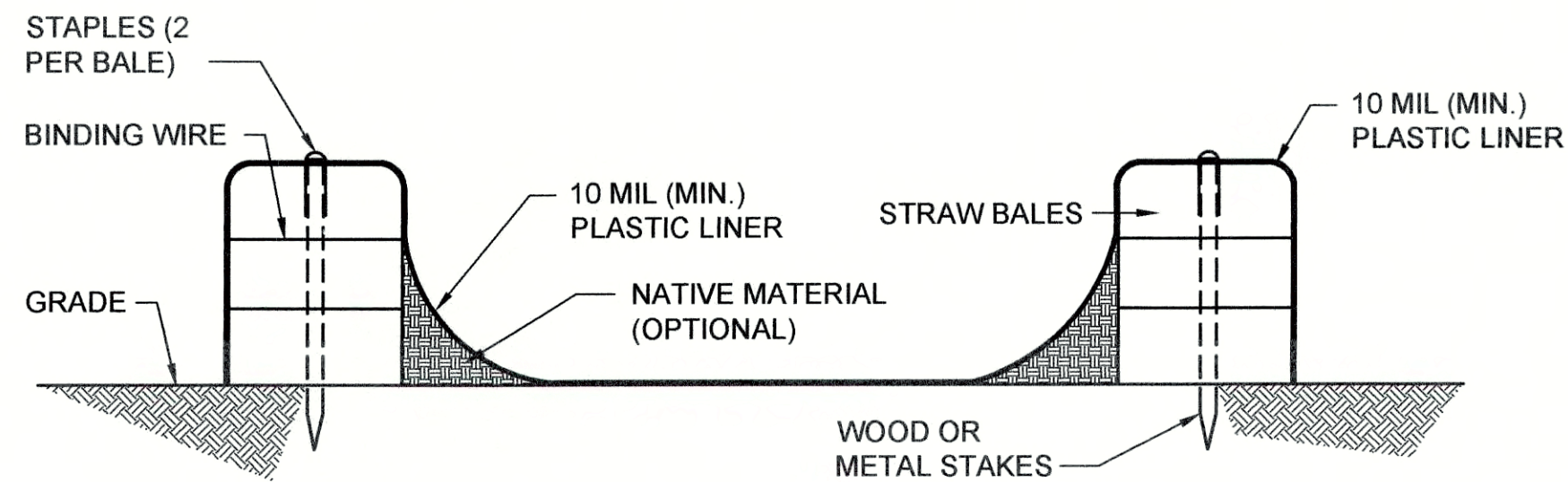
SEEDING TO BE APPLIED PRIOR TO THE INSTALLATION OF BLANKET. CONTRACTOR TO ENSURE A STABLE AND UNIFORM GRASS COVER DEVELOPS IN THE SWALE.

## DETAILS - EROSION CONTROL BLANKET INSTALLATION

NOT TO SCALE



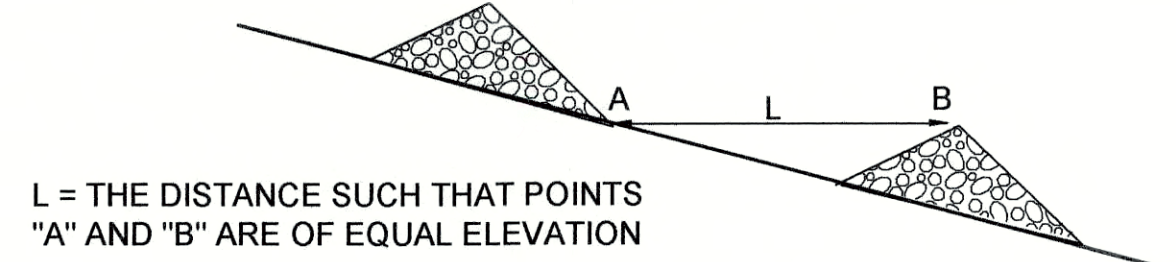
PLAN



SECTION

## DETAILS - CONCRETE WASHOUT

NOT TO SCALE

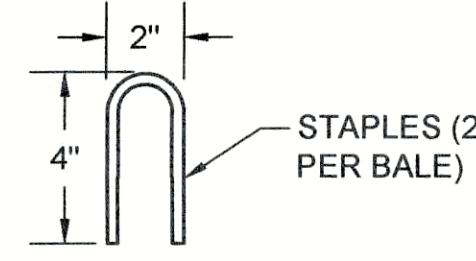


SPACING BETWEEN CHECK DAMS

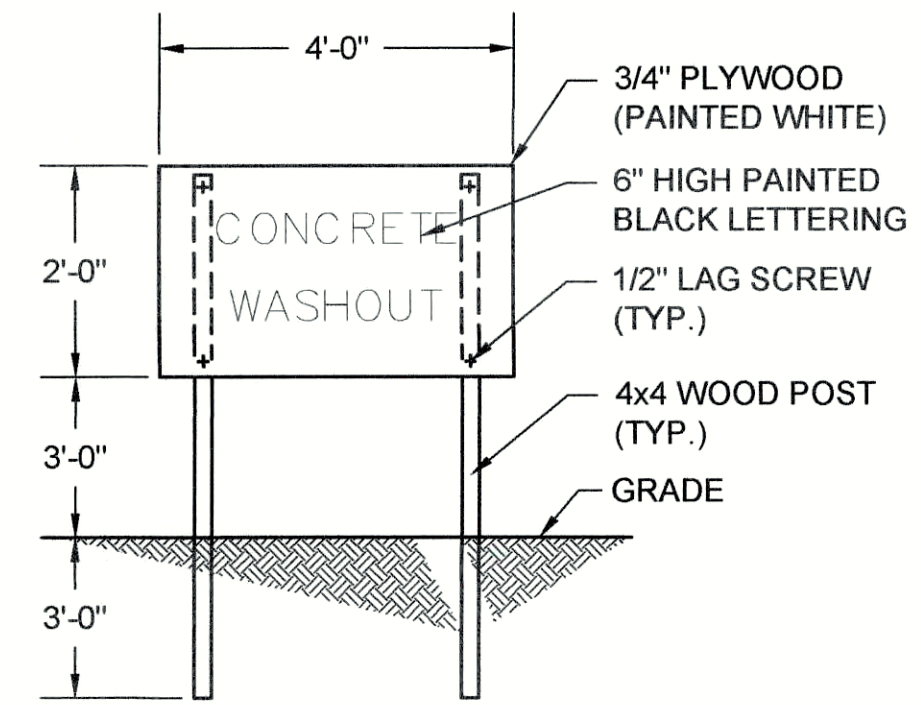
L = THE DISTANCE SUCH THAT POINTS "A" AND "B" ARE OF EQUAL ELEVATION

### NOTES:

- ACTUAL LAYOUT AND LOCATION TO BE DETERMINED IN FIELD.
- THE CONCRETE WASHOUT SIGN SHALL BE INSTALLED WITHIN 30 FT. OF THE TEMPORARY CONCRETE WASHOUT FACILITY.



STAPLE DETAIL



SIGN DETAIL

IN EVENT OF A HAZARDOUS SPILL, CONTACT  
MADISON EMERGENCY MANAGEMENT AGENT: (765) 642-0221

## SEASONAL SOIL PROTECTION CHART

STABILIZATION PRACTICE	JAN.	FEB.	MAR.	APR.	MAY	JUN.	JUL.	AUG.	SEP.	OCT.	NOV.	DEC.
PERMANENT SEEDING												
DORMANT SEEDING												
TEMPORARY SEEDING												
SODDING												
MULCHING												

A = INDOT SEED MIXTURE TYPE "R" - 170 LBS/ACRE PLUS 2 TONS STRAW MULCH/ACRE.  
B = KENTUCKY BLUEGRASS 60 LBS/ACRE; CREEPING RED FESCUE 60 LBS/ACRE; PLUS 2 TONS STRAW MULCH/ACRE, OR ADD ANNUAL RYEGRASS 30 LBS/ACRE.  
C = INDOT SEED MIXTURE TYPE "T" SPRING OATS - 150 LBS/ACRE  
D = INDOT SEE MIXTURE TYPE "T" WINTER WHEAT - 150 LBS/ACRE  
E = SOD  
F = STRAW MULCH 2 TONS/ACRE  
\*/\*\*/ IRRIGATION NEEDED DURING JUNE, JULY, AND/OR AUGUST.  
\*\* IRRIGATION NEEDED FOR 2 TO 3 WEEKS AFTER APPLYING SOD.



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SRF NO. WW16074803  
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EROSION CONTROL DETAILS  
SANITARY SEWER REHABILITATION  
SEWER REHABILITATION PROJECT PHASE II  
TOWN OF PENDLETON, INDIANA

DESIGNED	GWL	DRAWN	GCR	REVIEWED	JPT	APPROVED	JPT
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NO.	DATE	DESCRIPTION	SCALE

DATE: MARCH 2017  
SCALE: N.T.S.

SHEET NO.

C-46



NOTES:

1. FOR LOW-VOLUME SITUATIONS WITH SHORT WORK ZONES ON STRAIGHT ROADWAYS WHERE THE FLAGGER IS VISIBLE TO ROAD USERS APPROACHING FROM BOTH DIRECTIONS, A SINGLE FLAGGER, POSITIONED TO BE VISIBLE TO ROAD USERS APPROACHING FROM BOTH DIRECTIONS, MAY BE USED.
2. THE "ROAD WORK AHEAD" AND THE "END ROAD WORK" SIGNS MAY BE OMITTED FOR SHORT-DURATION OPERATIONS.
3. FLASHING WARNING LIGHTS AND/OR FLAGS MAY BE USED TO CALL ATTENTION TO THE ADVANCE WARNING SIGNS. A "BE PREPARED TO STOP" SIGN MAY BE ADDED TO THE SIGN SERIES.
4. THE BUFFER SPACE SHOULD BE EXTENDED SO THAT THE TWO-WAY TRAFFIC TAPER IS PLACED BEFORE A HORIZONTAL (OR CREST VERTICAL) CURVE TO PROVIDE ADEQUATE SIGHT DISTANCE FOR THE FLAGGER AND A QUEUE OF STOPPED VEHICLES.
5. AT NIGHT, FLAGGER STATIONS SHALL BE ILLUMINATED, EXCEPT IN EMERGENCIES.
6. WHEN USED, THE "BE PREPARED TO STOP" SIGN SHOULD BE LOCATED BETWEEN THE "FLAGGER" SIGN AND THE "ONE LANE ROAD" SIGN.

FOR HIGH SPEED URBAN CONDITIONS \*

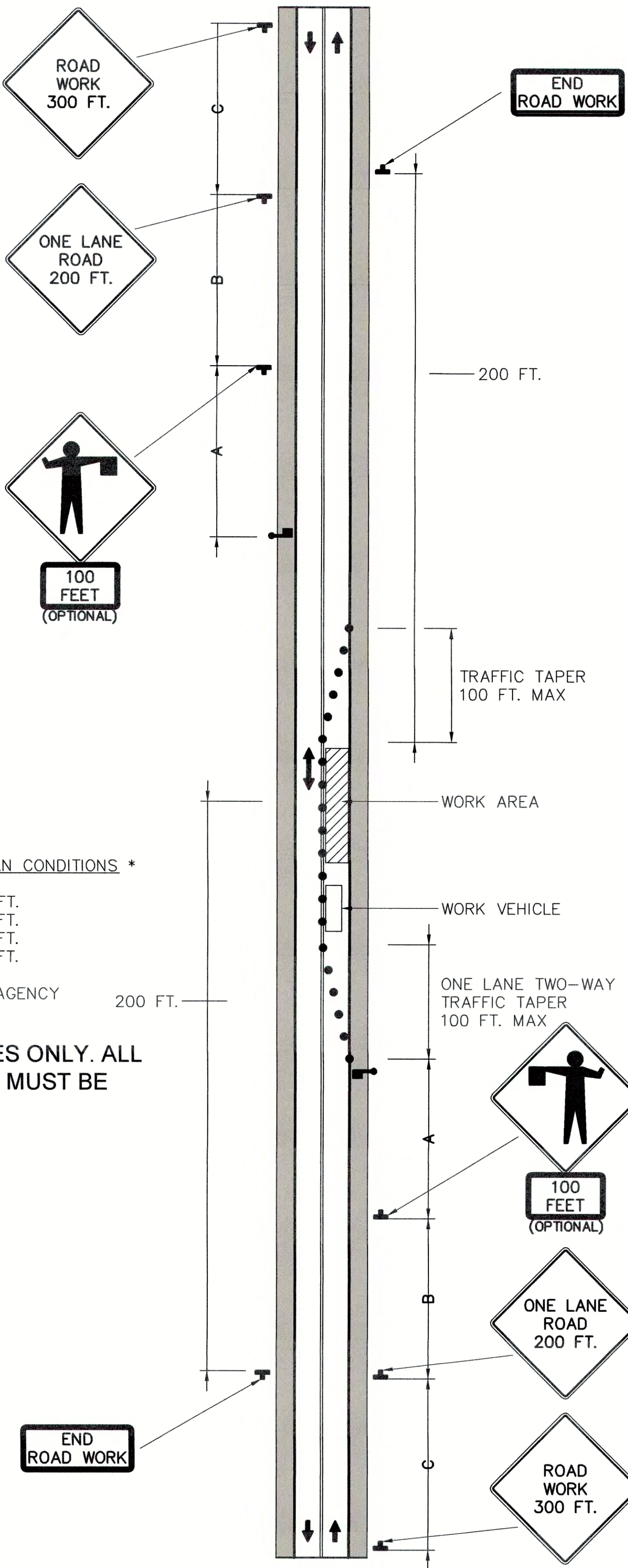
FOR LOW SPEED URBAN CONDITIONS \*

A=350 FT.  
B=350 FT.  
C=350 FT.  
L=350 FT.

A=100 FT.  
B=100 FT.  
C=100 FT.  
L=350 FT.

\* SPEED CATEGORY SHALL BE DETERMINED BY HIGHWAY AGENCY

NOTE: TRAFFIC CONTROL PLANS ARE GUIDELINES ONLY. ALL TRAFFIC CONTROL PLANS AND LANE CLOSURES MUST BE APPROVED BY THE APPROPRIATE AGENCY.  
TOWN OF PENDLETON: (765) 778-2173



DETAIL - TRAFFIC CONTROL PLAN (AT TWO LANE ROAD)

SCALE: N.T.S.

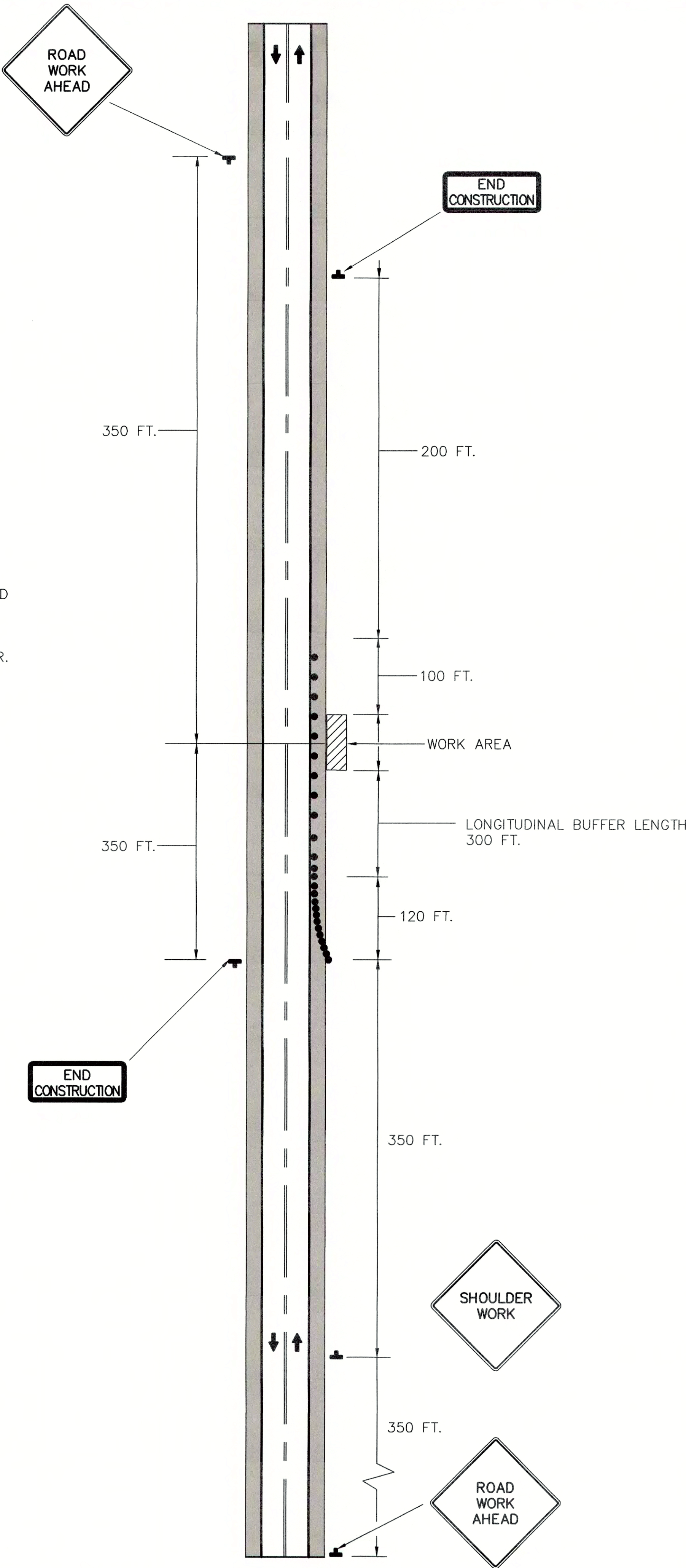
NOTES:

1. FLASHING WARNING LIGHTS AND/OR FLAGS MAY BE USED TO CALL ATTENTION TO THE ADVANCE WARNING SIGNS. A "BE PREPARED TO STOP" SIGN MAY BE ADDED TO THE SIGN SERIES.
2. FOR MORE DETAILED DRAWINGS AND NOTES, SEE INDOT DETAILS E 801-TCLC-07 AND E 801-TCLG-01.
3. THIS IS APPLICABLE TO THE WORK PLANNED ALONG S.R. 67 - POSTED SPEED LIMIT 40 MPH.
4. FOR ALL LOCAL STREET AND ALLEY CLOSURES, SEE INDOT "URBAN DETOUR" DETAIL E 801-TCDT-02 (THIS SHEET) AND DETAIL E 801-TCDT-03.

LEGEND

■	SIGN
●	CHANNELIZING DEVICE

NOTE: TRAFFIC CONTROL PLANS ARE GUIDELINES ONLY. ALL TRAFFIC CONTROL PLANS AND LANE CLOSURES MUST BE APPROVED BY THE APPROPRIATE AGENCY.  
LOCAL INDOT: (317) 467-3426  
TOWN OF PENDLETON: (765) 778-2173



DETAIL - TRAFFIC CONTROL PLAN FOR SHOULDER WORK ON TWO-LANE TWO-WAY HIGHWAY

SCALE: N.T.S.

JOSEPH P. TIERNY  
REGISTERED  
No. 19300407  
STATE OF INDIANA  
PROFESSIONAL ENGINEER

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SRF NO. W016074803 --  
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MAINTENANCE OF TRAFFIC  
SANITARY SEWER REHABILITATION  
SEWER REHABILITATION PROJECT PHASE II  
TOWN OF PENDLETON, INDIANA

DESIGNED	GWL	DRAWN	GCR	REVIEWED	JPT	APPROVED	JPT
DATE	BY	DATE	BY	DATE	BY	DATE	BY
NO.	NO.	NO.	NO.	NO.	NO.	NO.	NO.

DATE: MARCH 2017  
SCALE: N.T.S.  
SHEET NO. C-47



