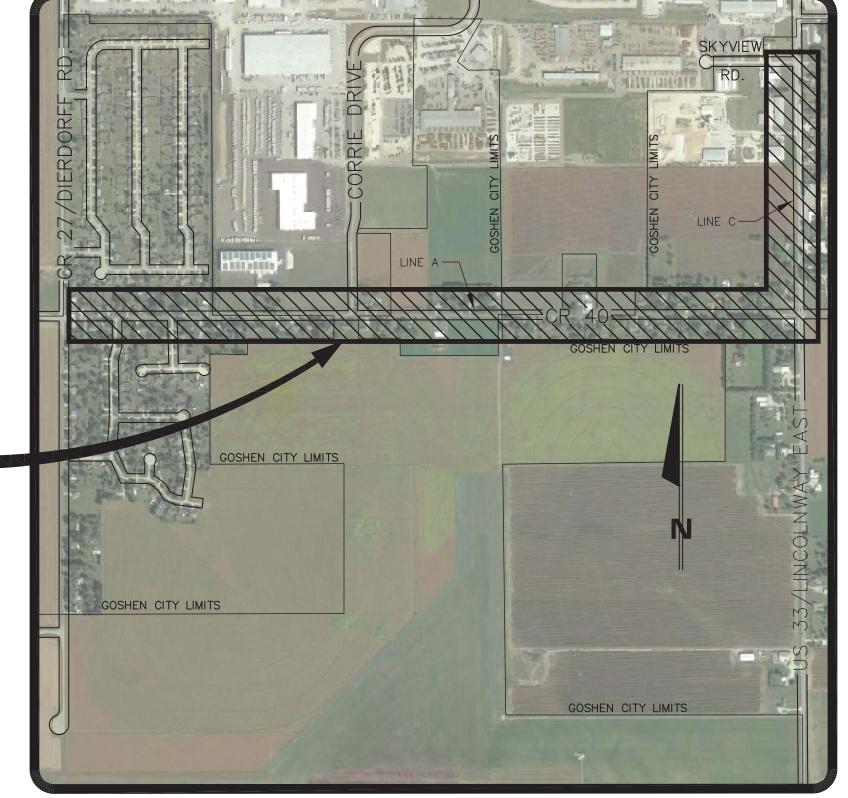
# STATE OF INDIANA ELKHART COUNTY PROJECT LOCATION SHOWN BY -

# COUNTY ROAD 40 / U.S. HIGHWAY 33 WATER MAIN UTILITY EXTENSION

PROJECT NO. 2017-0012

CITY OF GOSHEN



**PROJECT** SITE

> LOCATION MAP PART OF GOSHEN, INDIANA

SECTIONS 25, 26 & 35, TOWNSHIP 36 NORTH, RANGE 6 EAST, ELKHART TOWNSHIP ELKHART COUNTY

THE PROPOSED CONSTRUCTION WILL NOT BE LOCATED WITHIN THE 100 YEAR FLOODPLAIN

## PROJECT DESCRIPTION

THIS PROJECT INVOLVES EXTENSION OF A WATER MAIN EAST ALONG COUNTY ROAD 40 FROM COUNTY ROAD 27 TO U.S. HIGHWAY 33, THEN NORTH ALONG U.S. HIGHWAY 33 TO AN EXISTING 12" WATER MAIN AT SKYVIEW ROAD AND INCLUDES APPROXIMATELY 6,659 LFT OF 16" WATER MAIN, 2,251 LFT OF 12" WATER MAIN, AND ALL NECESSARY VALVES, FITTINGS, FIRE HYDRANTS, AND PLUGS INDICATED OR NECESSARY.

### UTILITY LOCATIONS

UTILITY LOCATIONS ARE APPROXIMATED FROM RECORD INFORMATION AND MUST BE VERIFIED PRIOR TO CONSTRUCTION. PIPE INVERTS HAVE BEEN MEASURED WITH AS MUCH ACCURACY AS CAN BE ACHIEVED WITHOUT CONFINED SPACE ENTRY. THE CONTRACTOR SHALL BE RESPONSIBLE FOR FIELD VERIFICATION OF PIPE INVERTS, AND SHALL NOTIFY THE ENGINEER IMMEDIATELY IF A DISCREPANCY IS DISCOVERED

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# GENERAL NOTES

FOR PROTECTION OF UNDERGROUND UTILITIES, CONTRACTOR SHALL CALL 1-800-382-5544 A MINIMUM OF THREE WORKING DAYS PRIOR TO EXCAVATING IN THE VICINITY OF UTILITY LINES. ALL "HOLEY MOLEY" PARTICIPATING MEMBERS WILL THUS BE ROUTINELY NOTIFIED. THIS DOES NOT RELIEVE THE CONTRACTOR OF NOTIFYING UTILITY OWNERS WHO MAY NOT BE PART OF THE "HOLEY MOLEY" ALERT

IF ANY ERRORS BECOME APPARENT, THESE SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER PRIOR TO CONSTRUCTION SO THAT CLARIFICATION OR REDESIGN

THE CONTRACTOR SHALL CONFORM TO THE CURRENT STANDARDS AND SPECIFICATIONS OF THE LOCAL GOVERNMENT, INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT, AND THE INDÍANA DEPARTMENT OF TRANSPORTATION.

THE CONTRACTORS SHALL MAKE WHATEVER SOIL BORINGS NECESSARY TO FULLY ACQUAINT THEMSELVES WITH CONDITIONS AS THEY EXIST SO THAT THEY MAY FULLY UNDERSTAND THE CONDITIONS WHICH MAY AFFECT THE COST OF THE WORK. FAILURE TO MAKE SUCH BORINGS OR ANY BORINGS MADE WHICH DO NOT PROVIDE A COMPLETE UNDERSTANDING OF THE CONDITIONS ENCOUNTERED SHALL NOT RELIEVE THE CONTRACTOR OF THE RESPONSIBILITY FOR CARRYING OUT ALL THE WORK TO COMPLETION AS SHOWN ON THE PLANS, OR AS SPECIFIED, AT THE PRICE SPECIFIED TO BE PAID FOR THE WORK. WHERE THE RESULTS OF ANY TEST BORINGS ARE SHOWN ON THE PLANS, THE INFORMATION IS NOT GUARANTEED AND THE CONTRACTOR MUST SATISFY HIMSELF AS TO THE CHARACTER OF MATERIALS THAT MAY BE ENCOUNTERED.

THE CONTRACTOR SHALL FOLLOW THE IOSHA REGULATIONS 29 C.F.R. 1926 SUBPART P. FOR TRENCH SAFETY SYSTEMS. THE COST FOR TRENCH SAFETY SYSTEMS SHALL BE MERGED INTO THE PAY ITEM OF THE PRINCIPAL WORK WITH WHICH THE SAFETY SYSTEMS ARE ASSOCIATED. THE CONTRACTOR SHALL OTHERWISE BE RESPONSIBLE FOR SAFETY IN REGARD TO THE PROJECT'S CONSTRUCTION.

OWNER/DEVELOPER CITY OF GOSHEN 204 E. JEFFERSON

GOSHEN, IN DUSTIN K. SAILOR, P.E., S.I.T., C.P.E.S.C.

SURVEYOR/ENGINEER JONES, PETRIE, RAFINSKI CORP. 200 NIBCO PARKWAY, SUITE 200 ELKHART, IN 46516 CHIRAG PATEL, P.E.

**SUB-CONSULTANT** 

TERRITORIAL ENGINEERING, LLC 7908 NORTH STATE HWY. 23 WALKERTON, IN 46574 ROBERT S. ALOI, P.S.



7 / U.S. HIGHWAY TY EXTENSION GOSHEN ROAD 40 /

DESIGNED BY: CHIRAG PATEL DRAWN BY: REZ

DECEMBER 2016

IOB NUMBER: 2017-0012 NONE

X-2486-01



# GOVERNMENT

MAYOR JEREMY P. STUTSMAN

COMMON COUNCIL DISTRICT ONE JIM McKEE

> DISTRICT TWO EDWARD A. AHLERSMEYER II

DISTRICT THREE MIKE ORGILL DISTRICT FOUR JULIA A. GAUTSCHE DISTRICT FIVE

ADAM SCHARF COUNCILMAN-AT-LARGE BRETT WEDDELL

COUNCILWOMAN-AT-LARGE

JULIA KING

BOARD OF PUBLIC

JEREMY P. STUTSMAN, MAYOR WORKS AND SAFETY MICHAEL LANDIS, MEMBER

MITCH DAY, MEMBER

GOSHEN WATER WORKS

202 S. 5TH STREET 574-533-9399

GOSHEN WASTEWATER TREATMENT & UTILITY

202 S. 5TH STREET GOSHEN, IN 46528 KENT HOLDREN 574-533-9399

ELECTRIC **NIPSCO** 

GOSHEN, IN 46526 RICH HAMMOND

GAS

300 E. KERCHER ROAD GOSHEN, IN 46526 RICH HAMMOND 574-535-0259

TELEPHONE FRONTIER

ELKHART, IN 46516

FIBER OPTIC

CABLE COMCAST **TELEVISION** 

JIM PETERSON 574-271-1284

UTILITY "HOLEY MOLEY" LOCATE

UTILITIES

GOSHEN, IN 46528 KENT HOLDREN

SEWER

300 E. KERCHER ROAD 574-535-0259

**NIPSCO** 

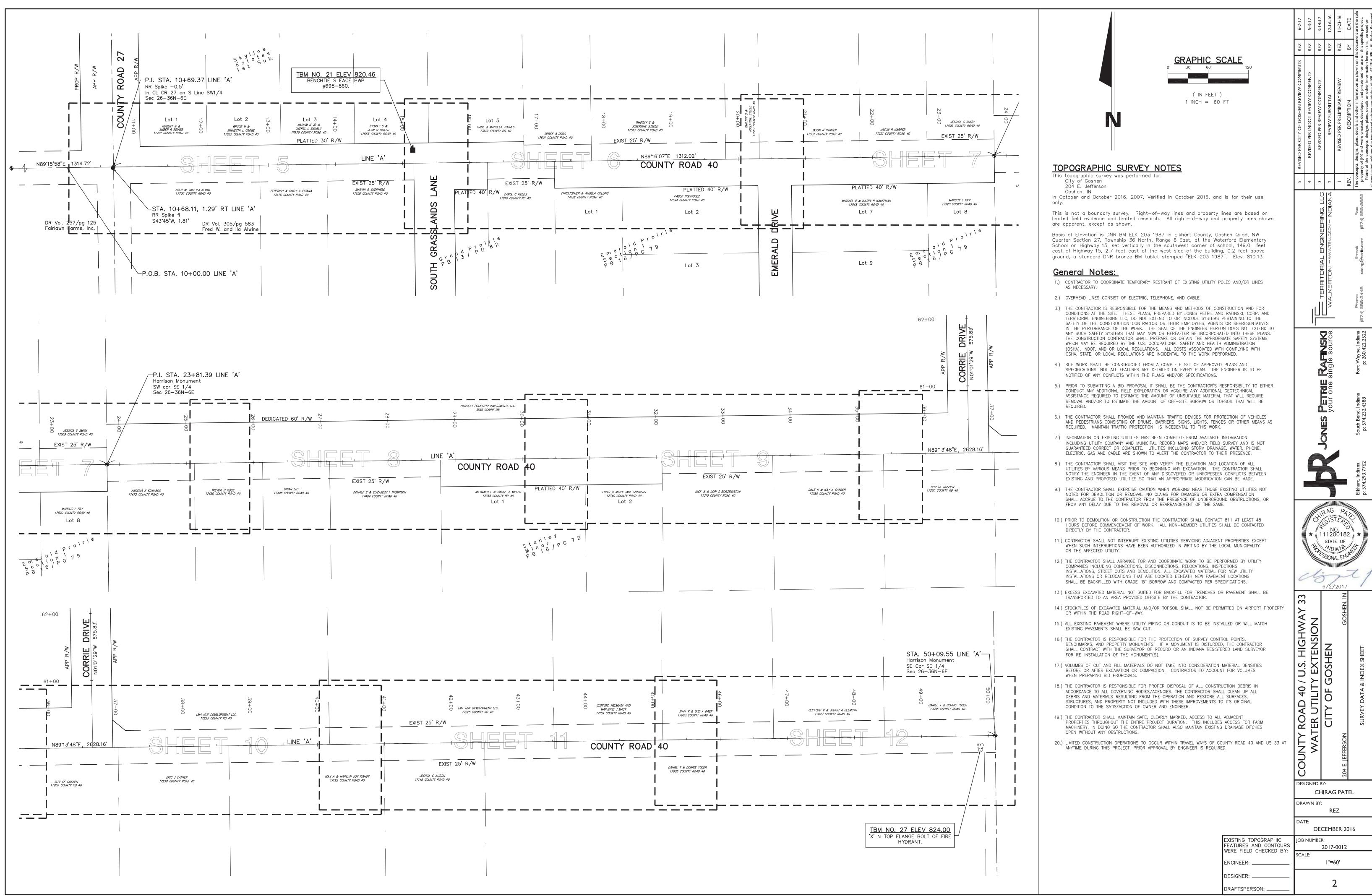
ENGINEERING DEPT. 24373 COUNTY ROAD 45

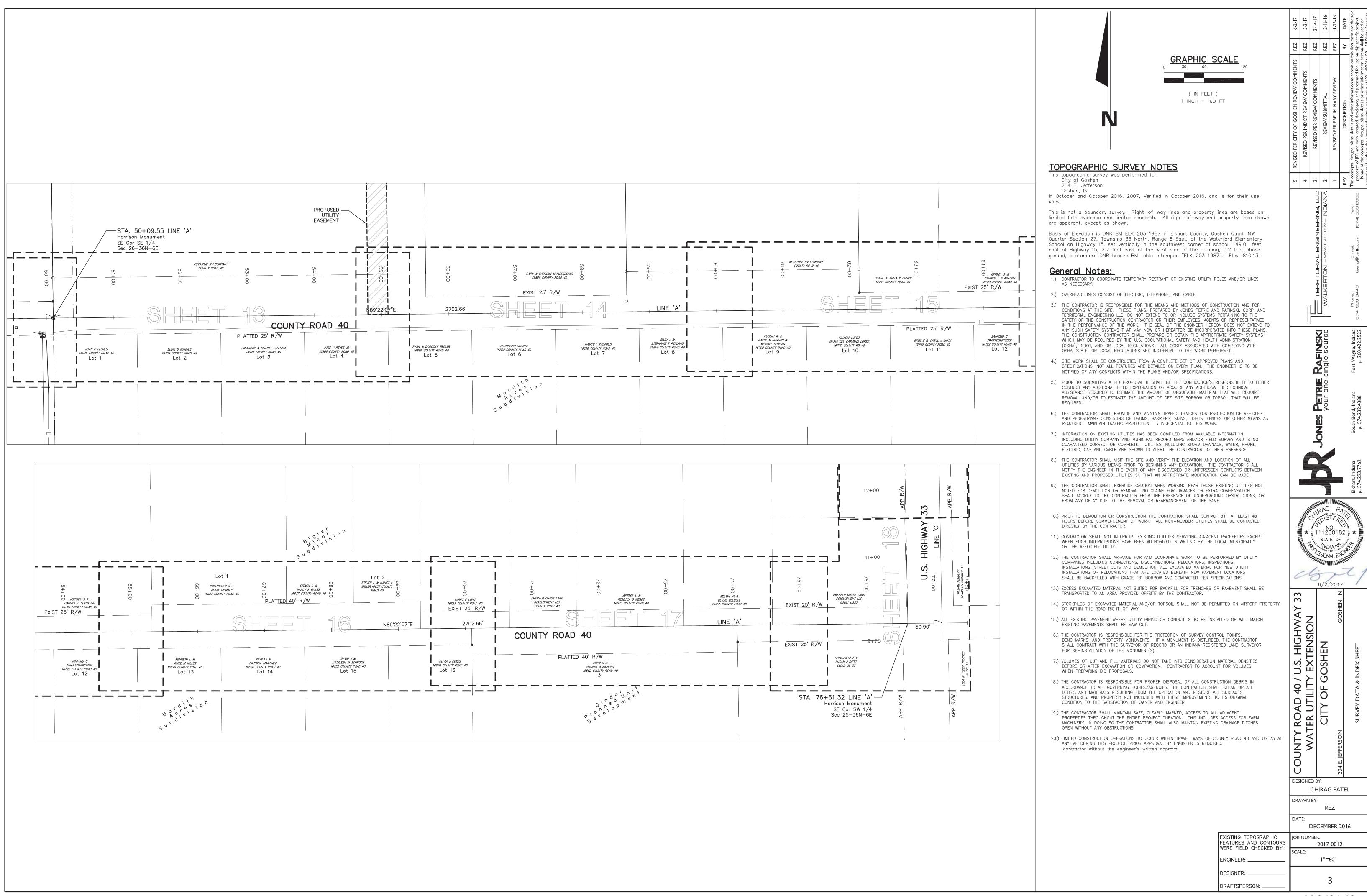
574-535-4549 TELEPHONE/ NEW PARIS TELEPHONE/COMMUNITY FIBER NETWORK

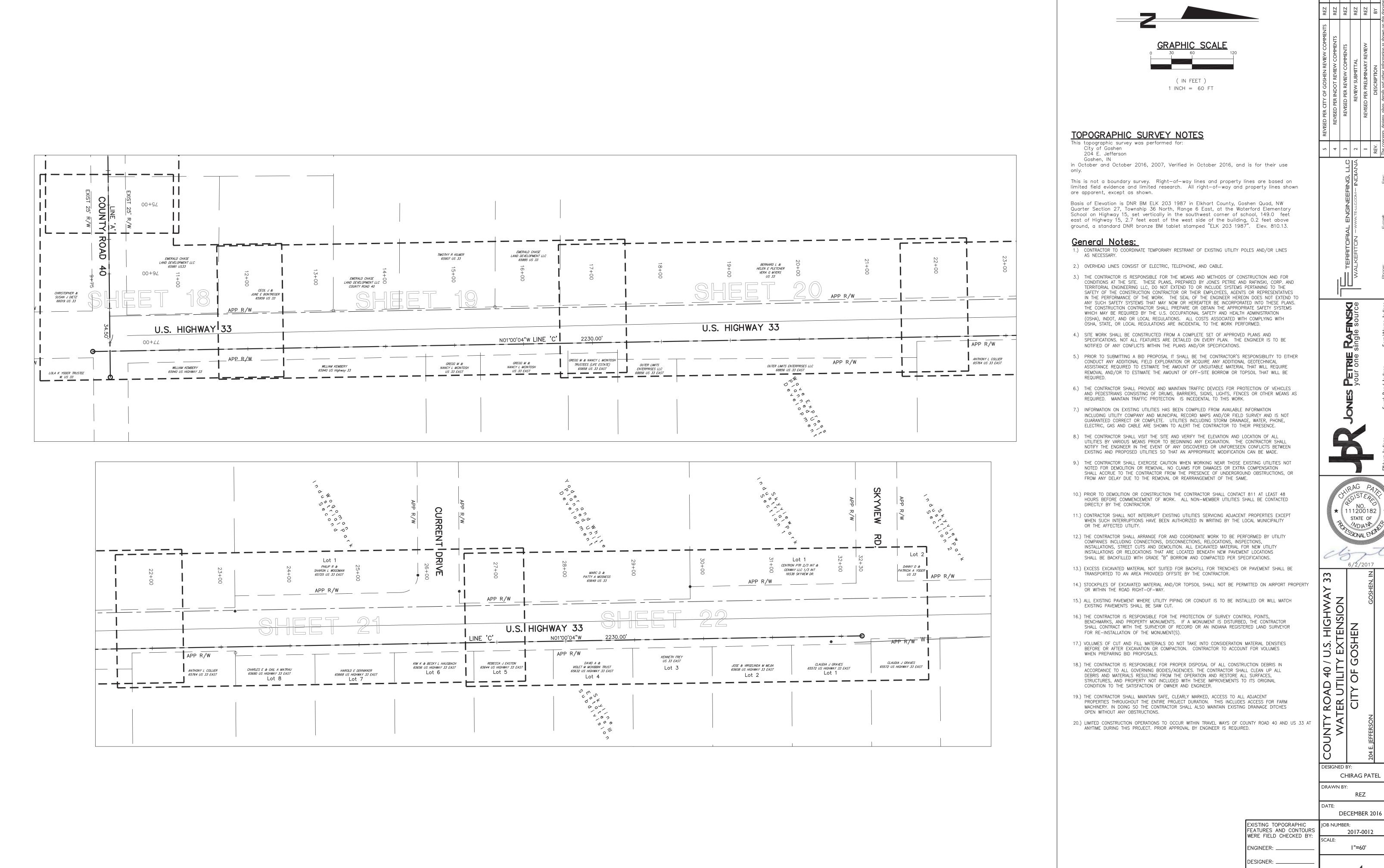
19066 MARKET STREET NEW PARIS, IN 46553 574-831-2179

> 4045 EDISON LAKES PARKWAY MISHAWAKA, IN 46545

> > 1-800-382-5544 OR 811



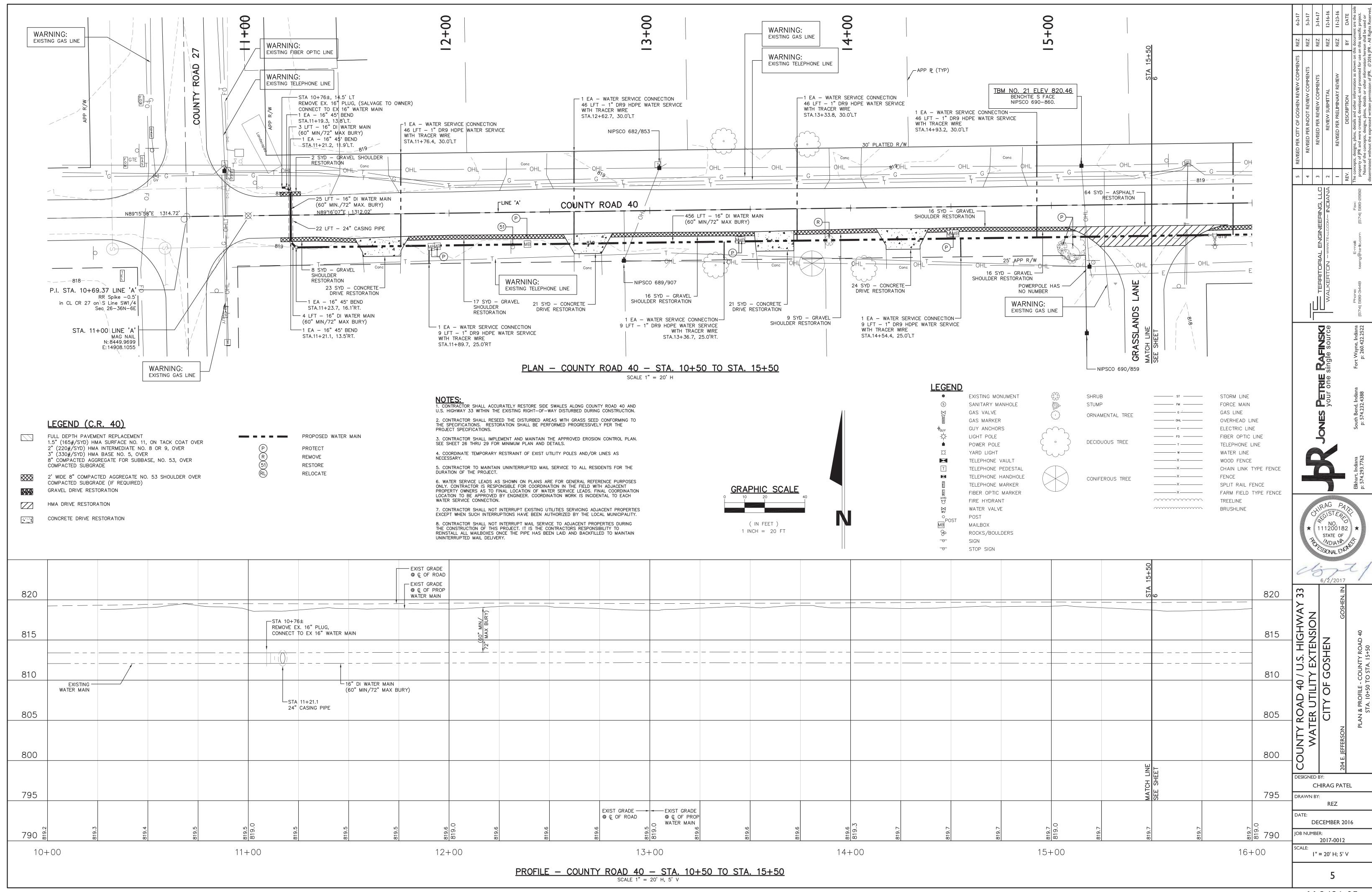


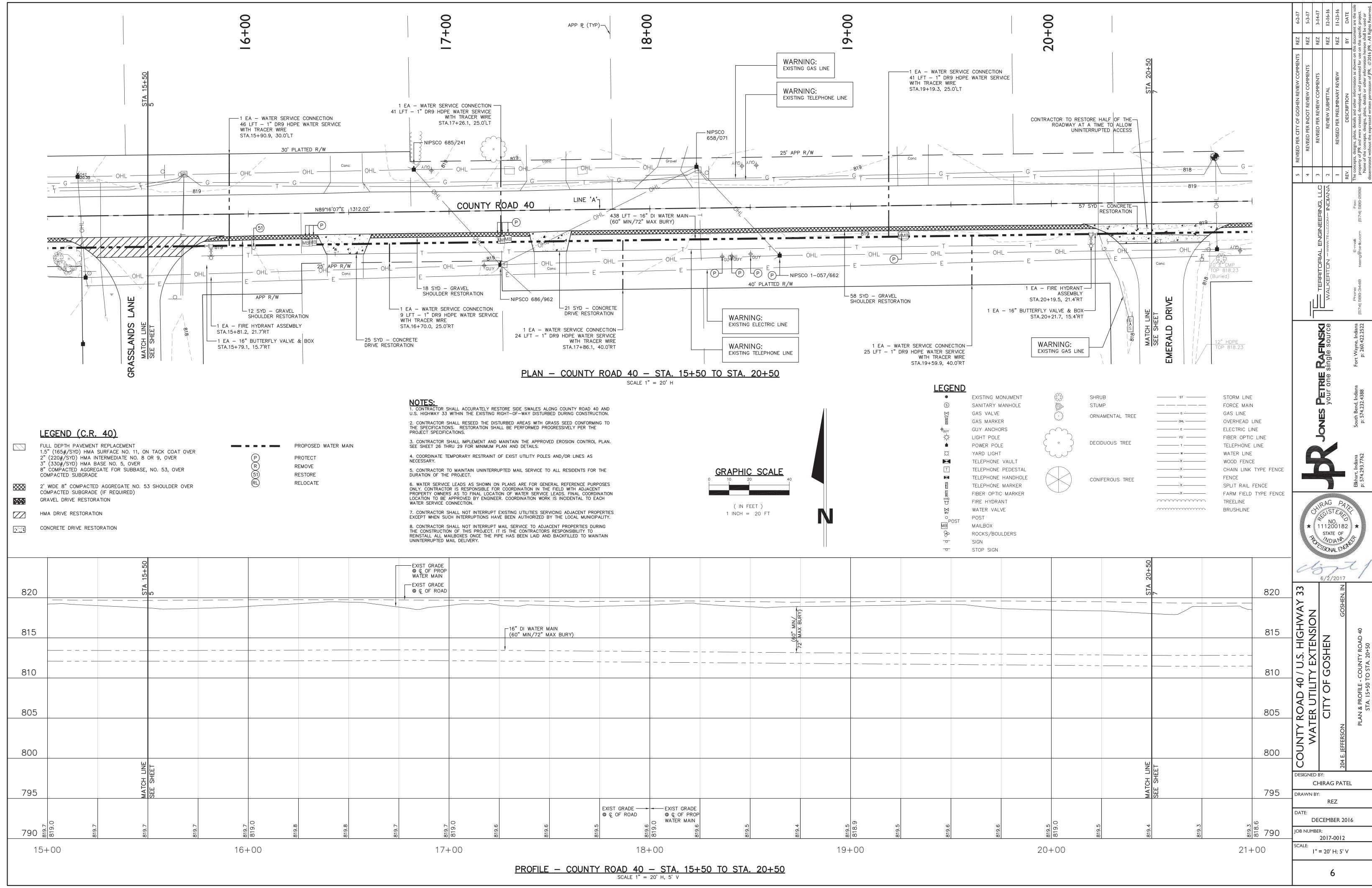


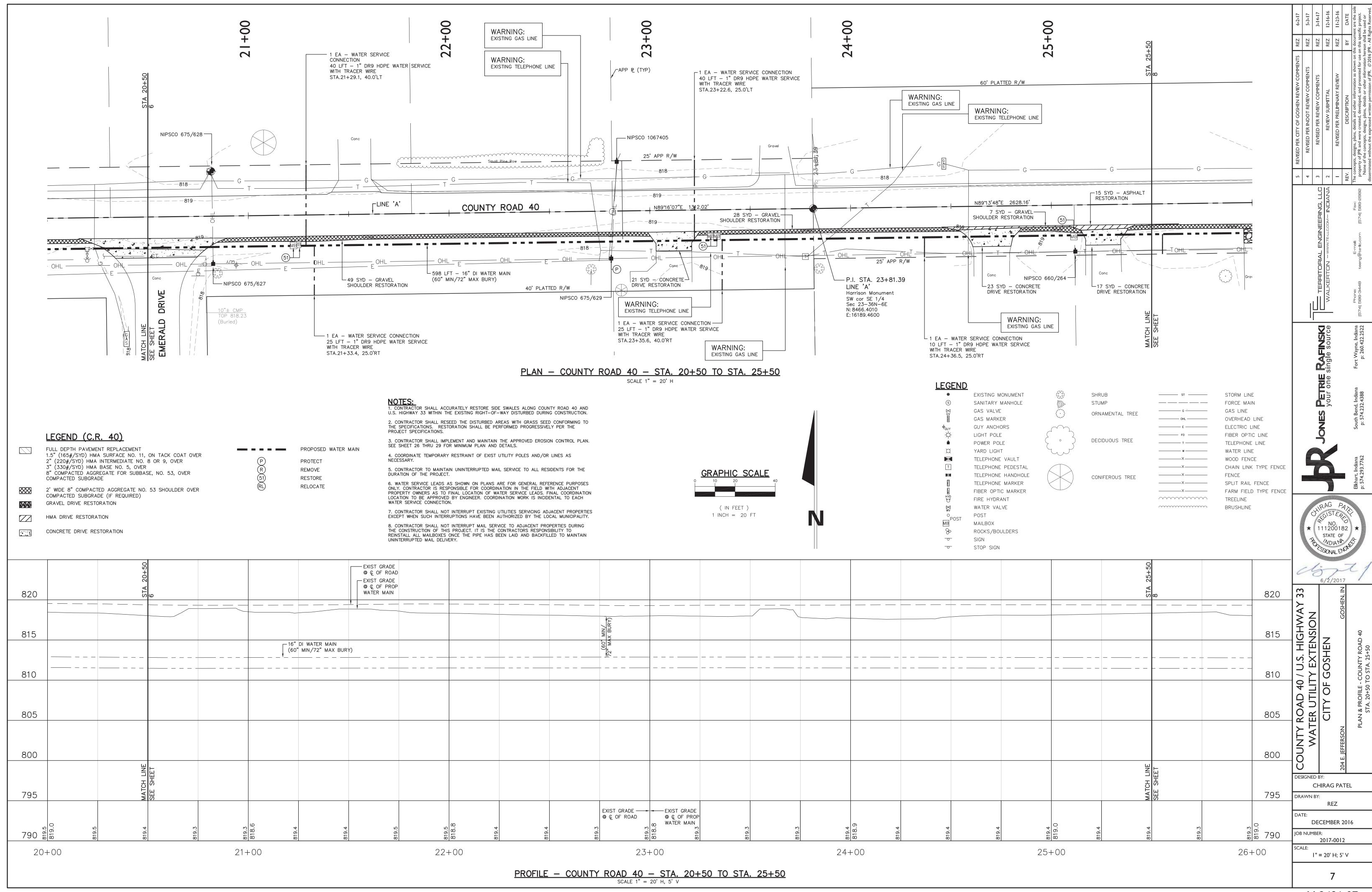
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Γ	COUNTY ROAD 40 / U.S. HIGHWAY 33	WATER UTILITY EXTENSION	CITY OF GOSHEN	204 E. JEFFERSON GOSHEN, IN	SURVEY DATA & INDEX SHEET
	DESIGNED BY:  CHIRAG PATEL  DRAWN BY:				

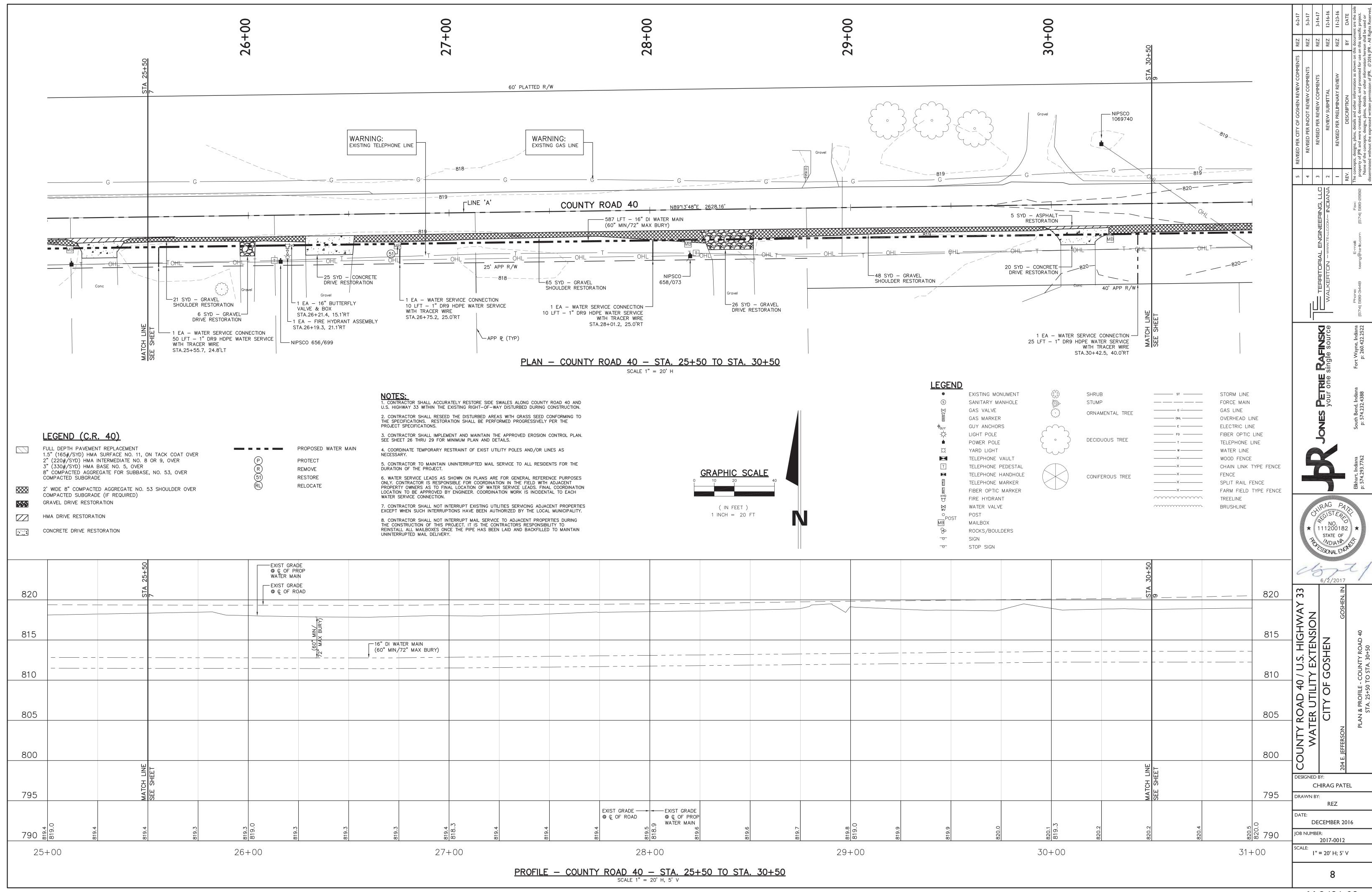
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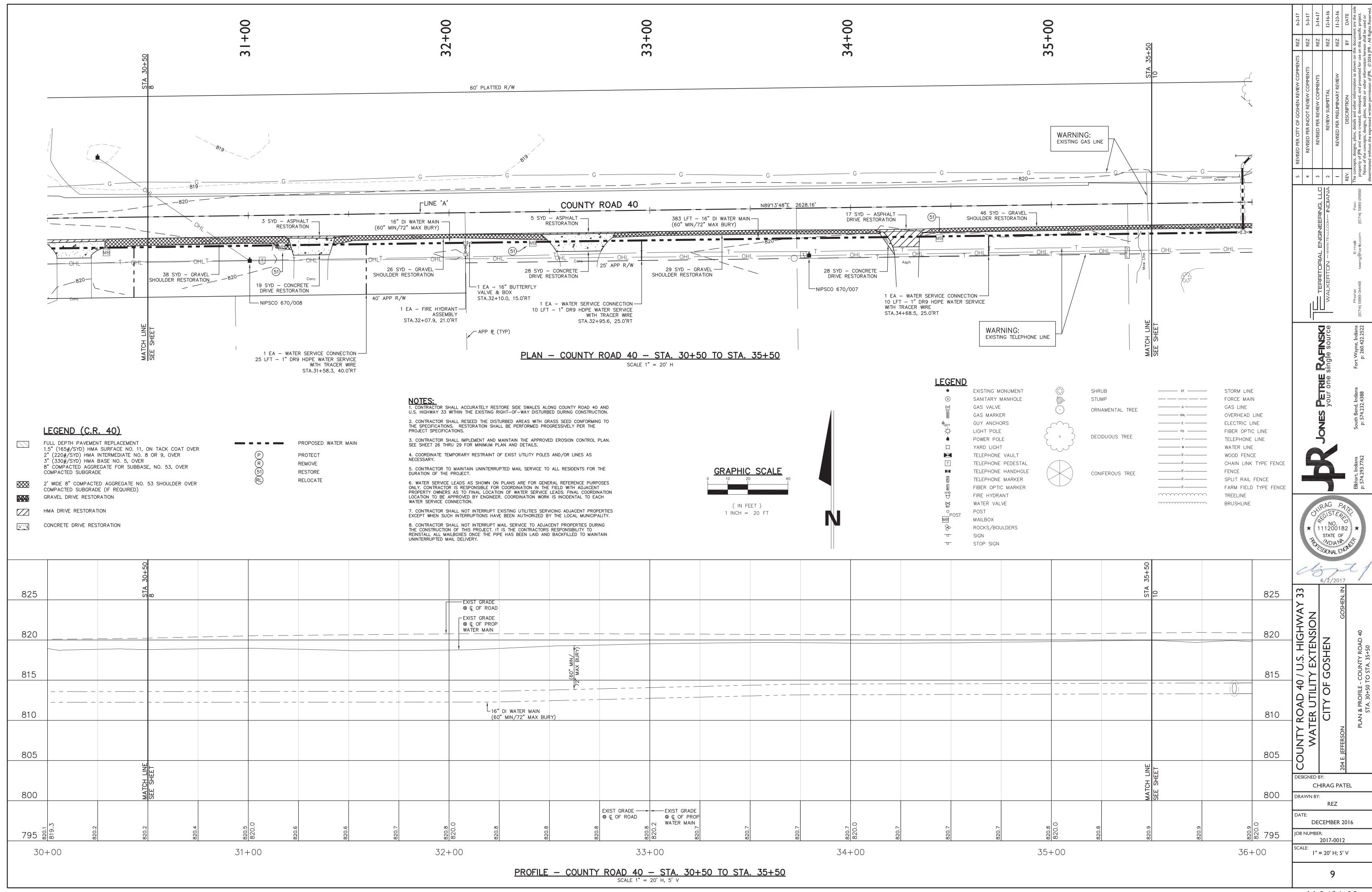
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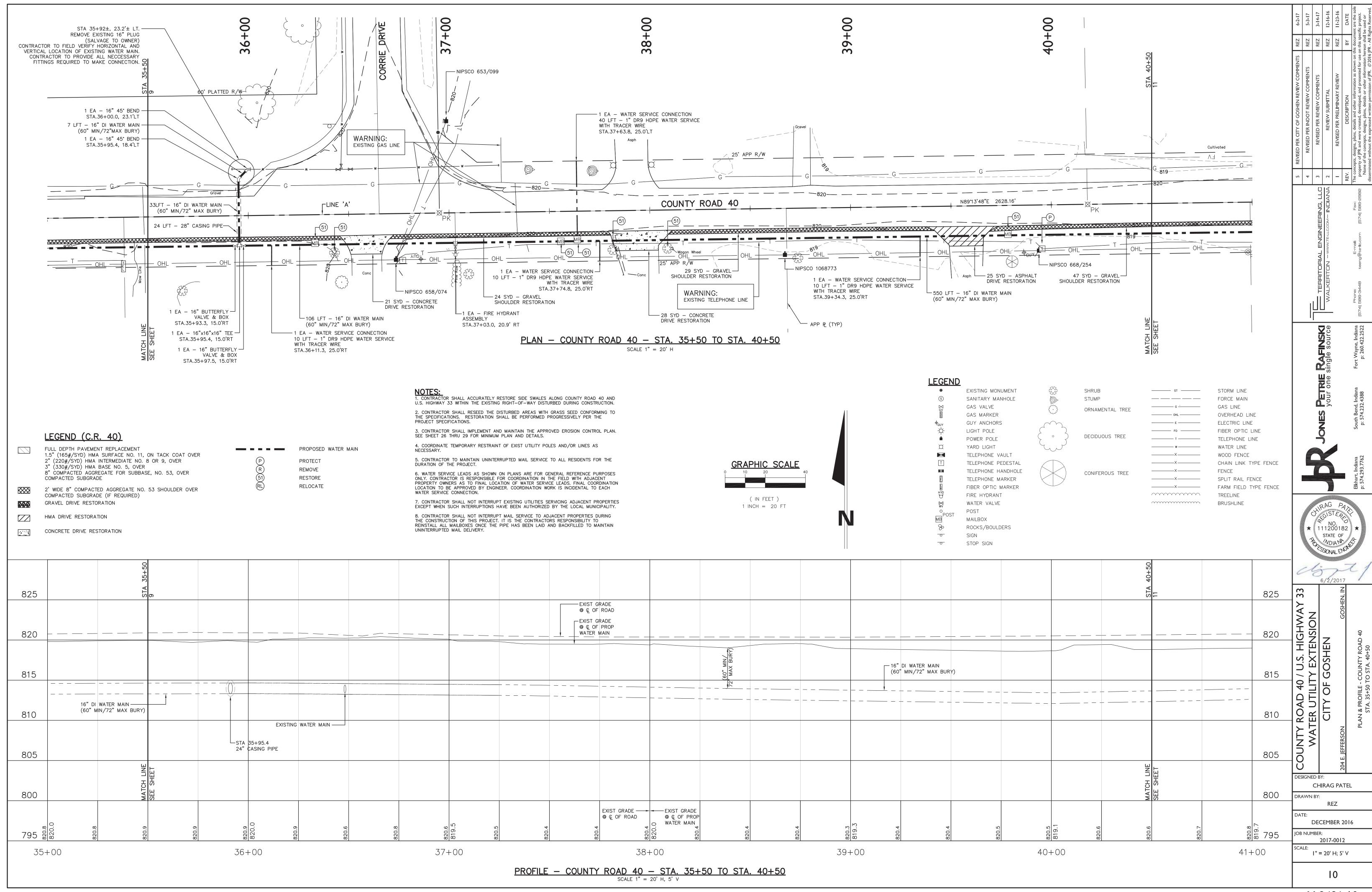


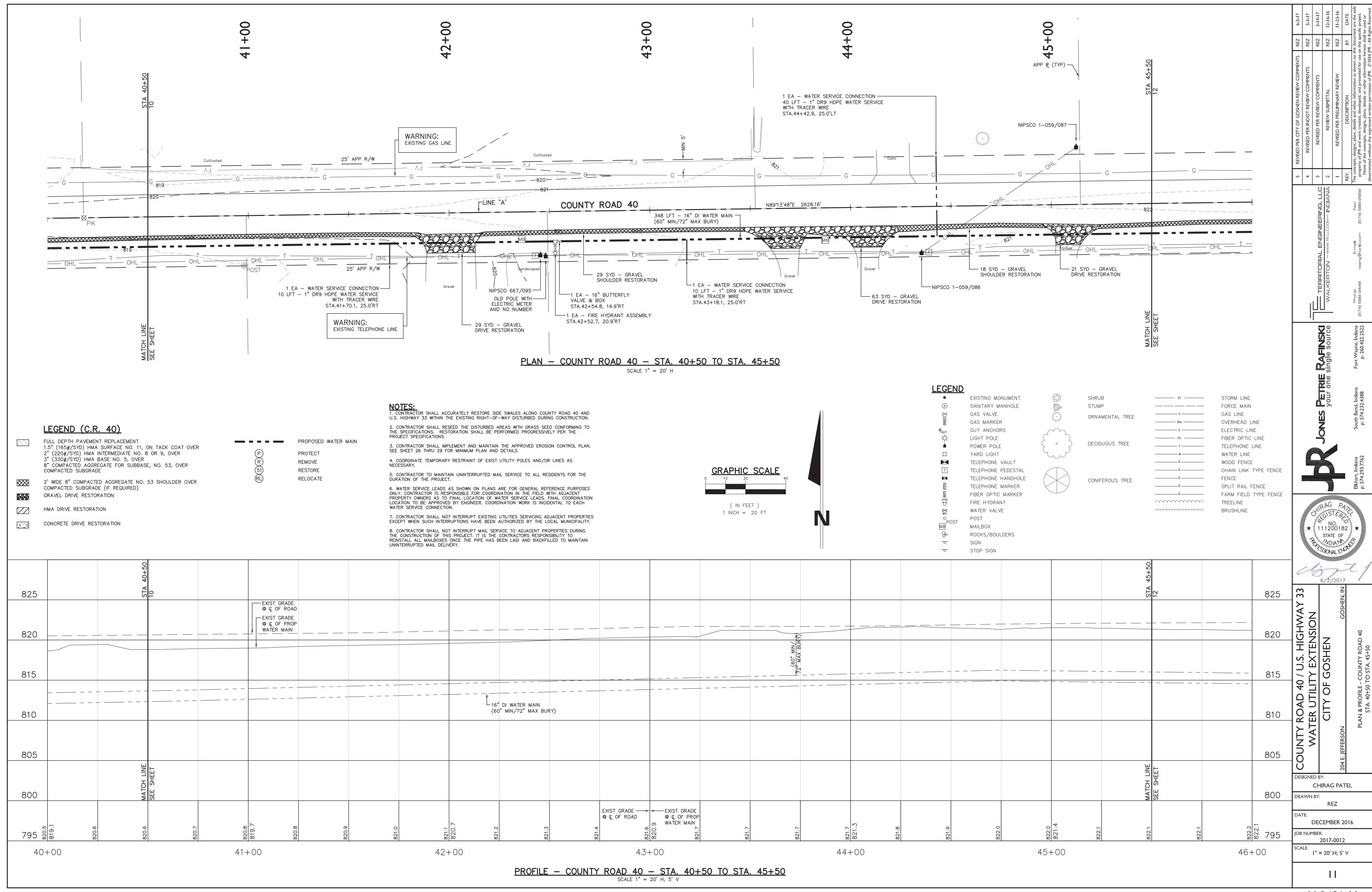


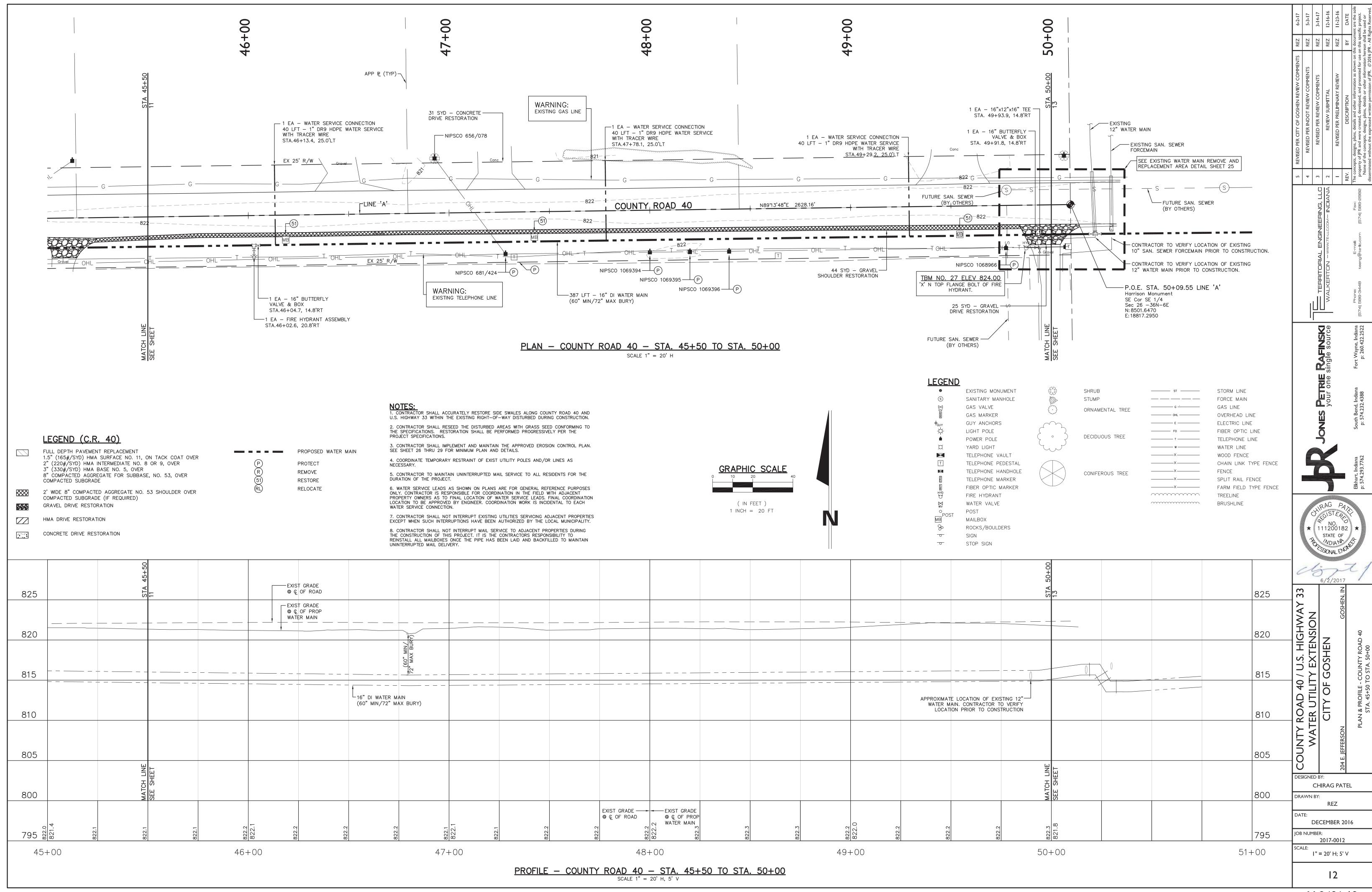


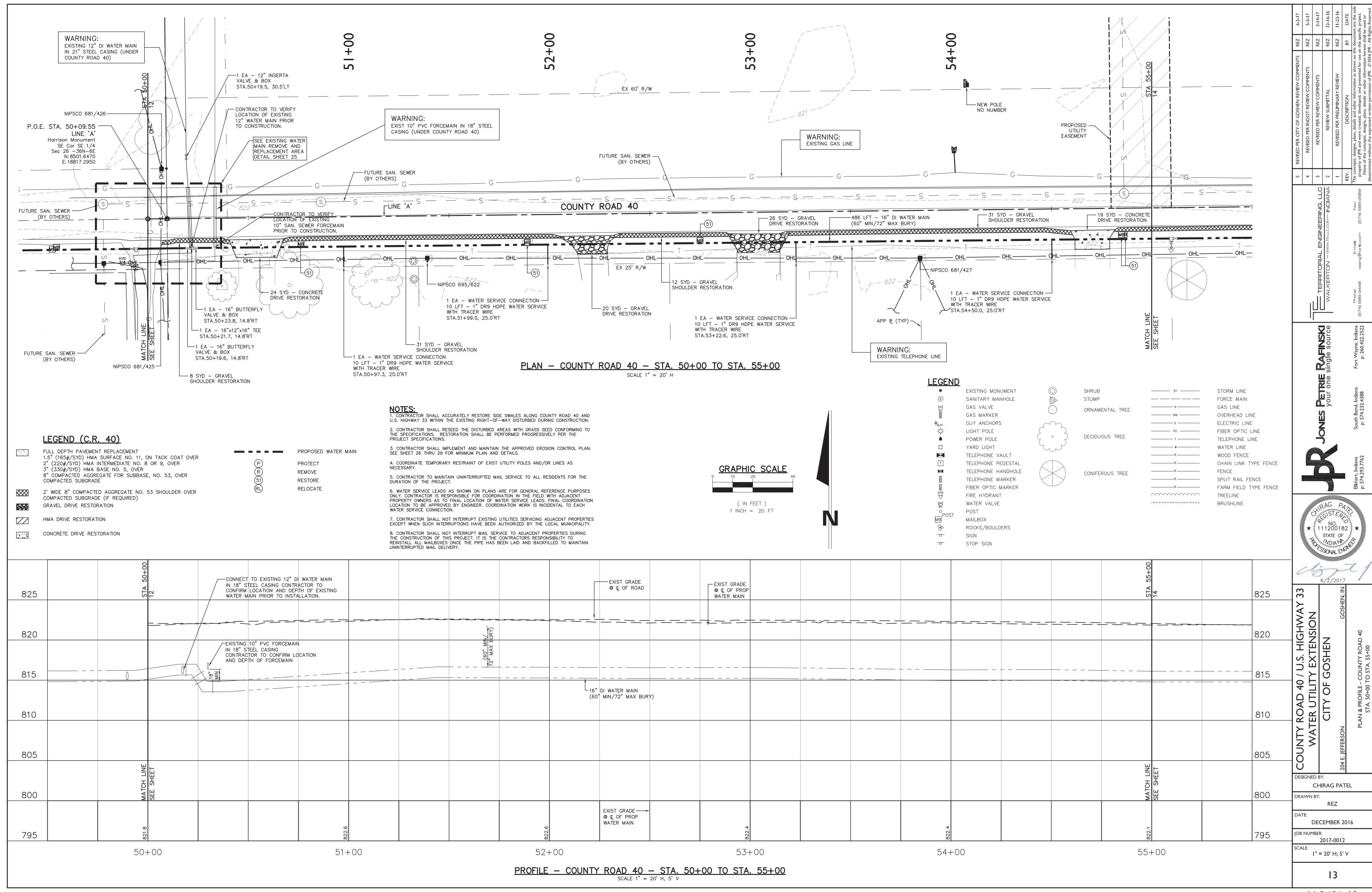


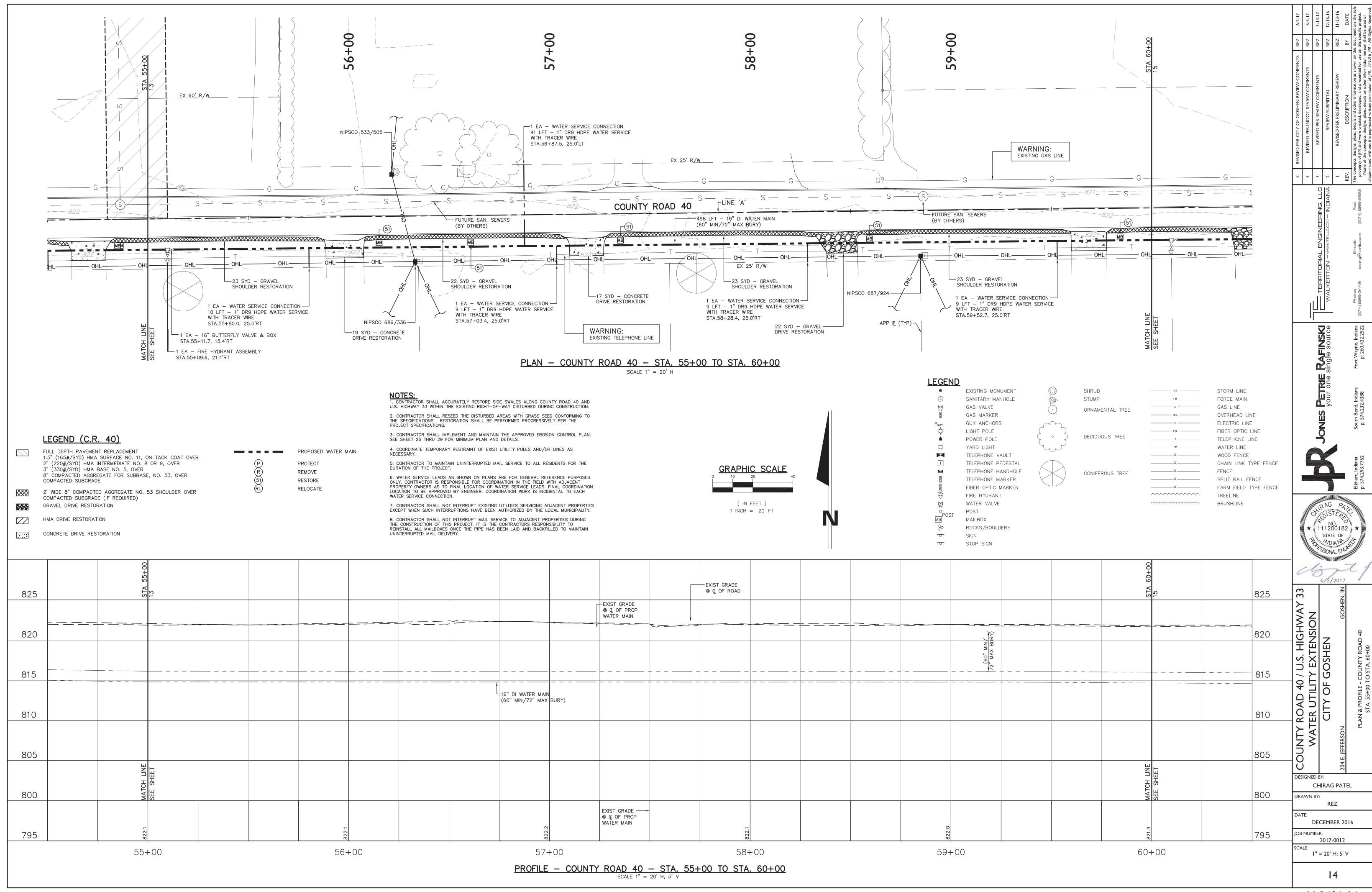


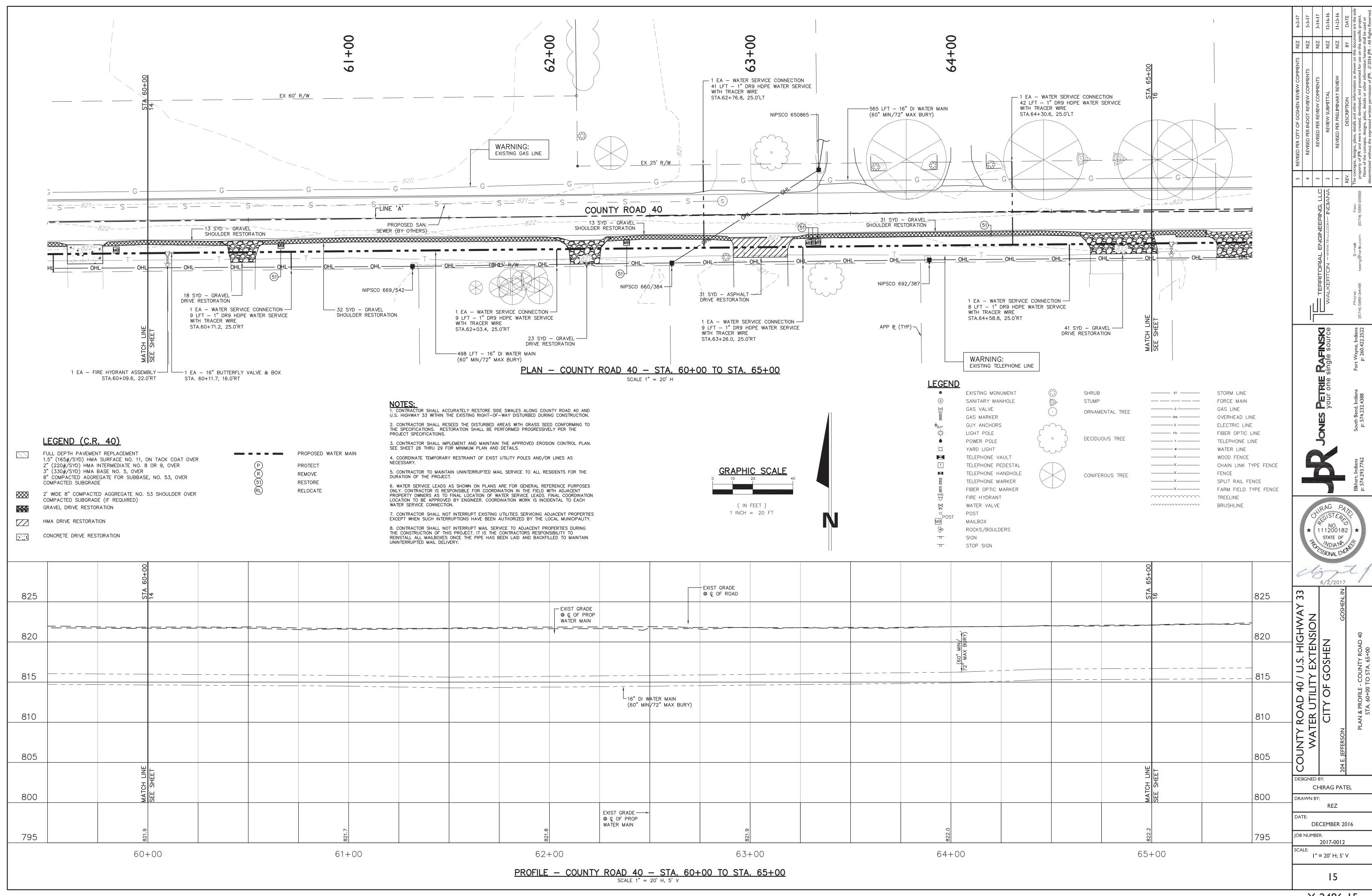


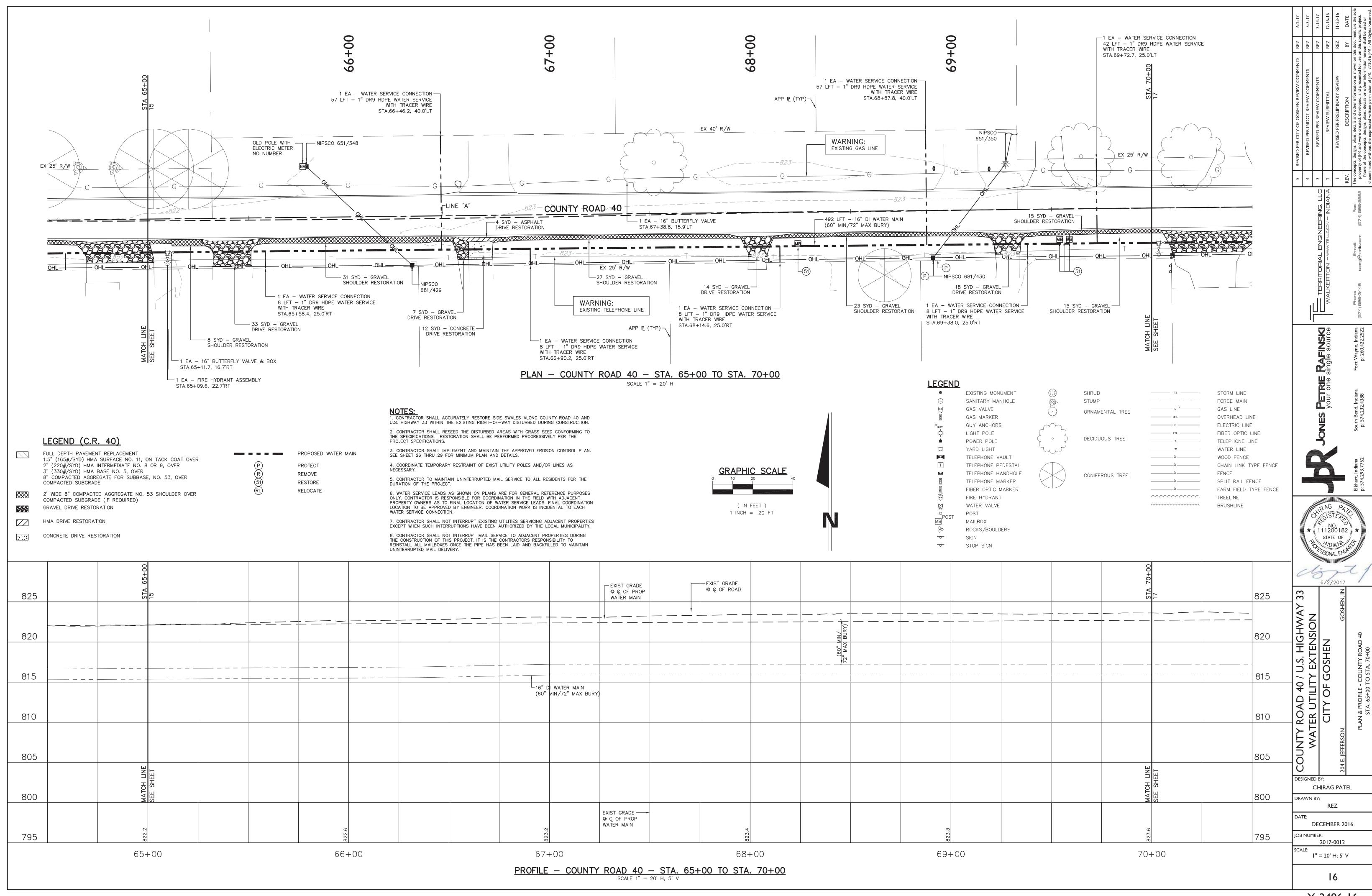


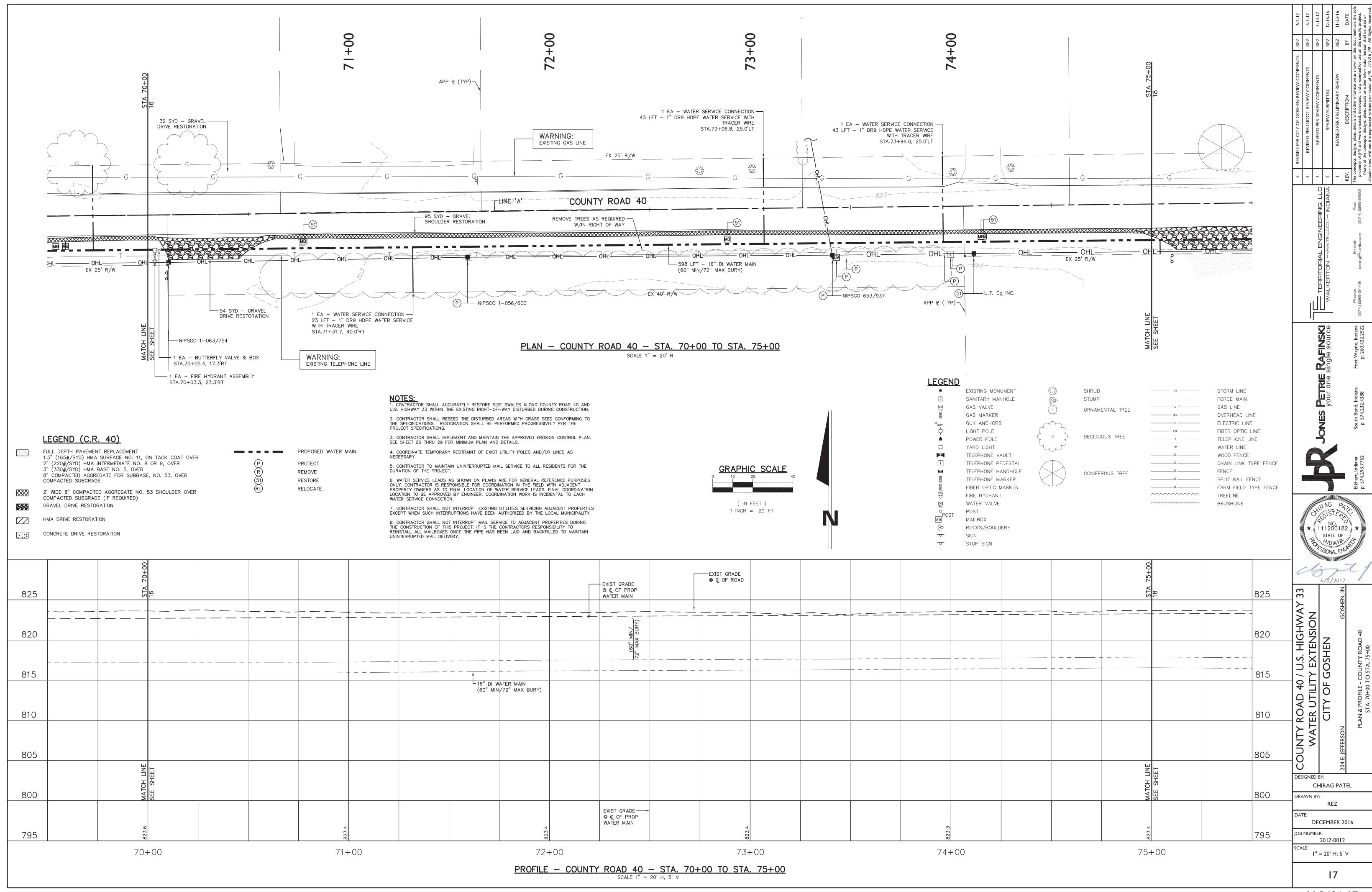


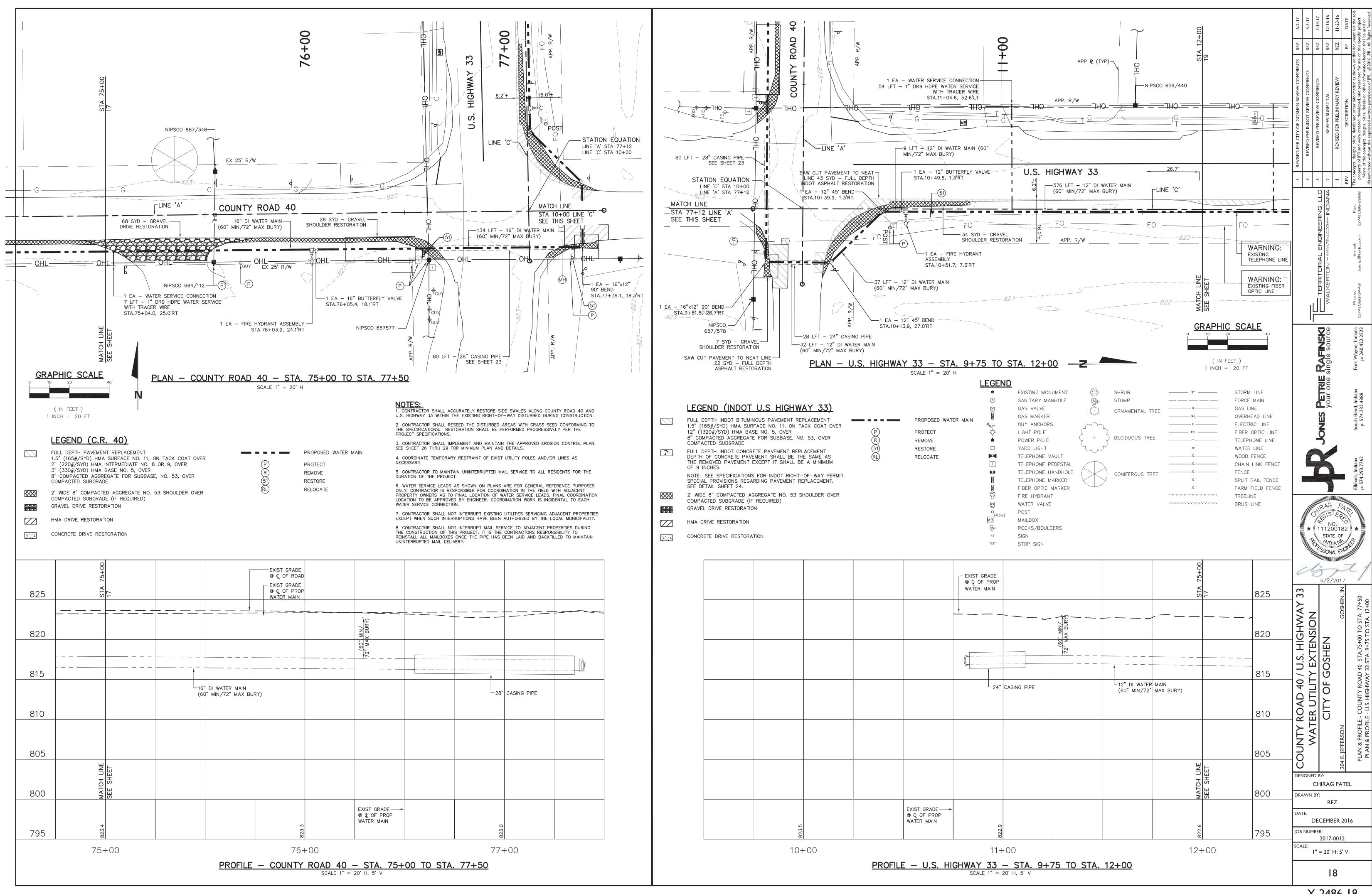


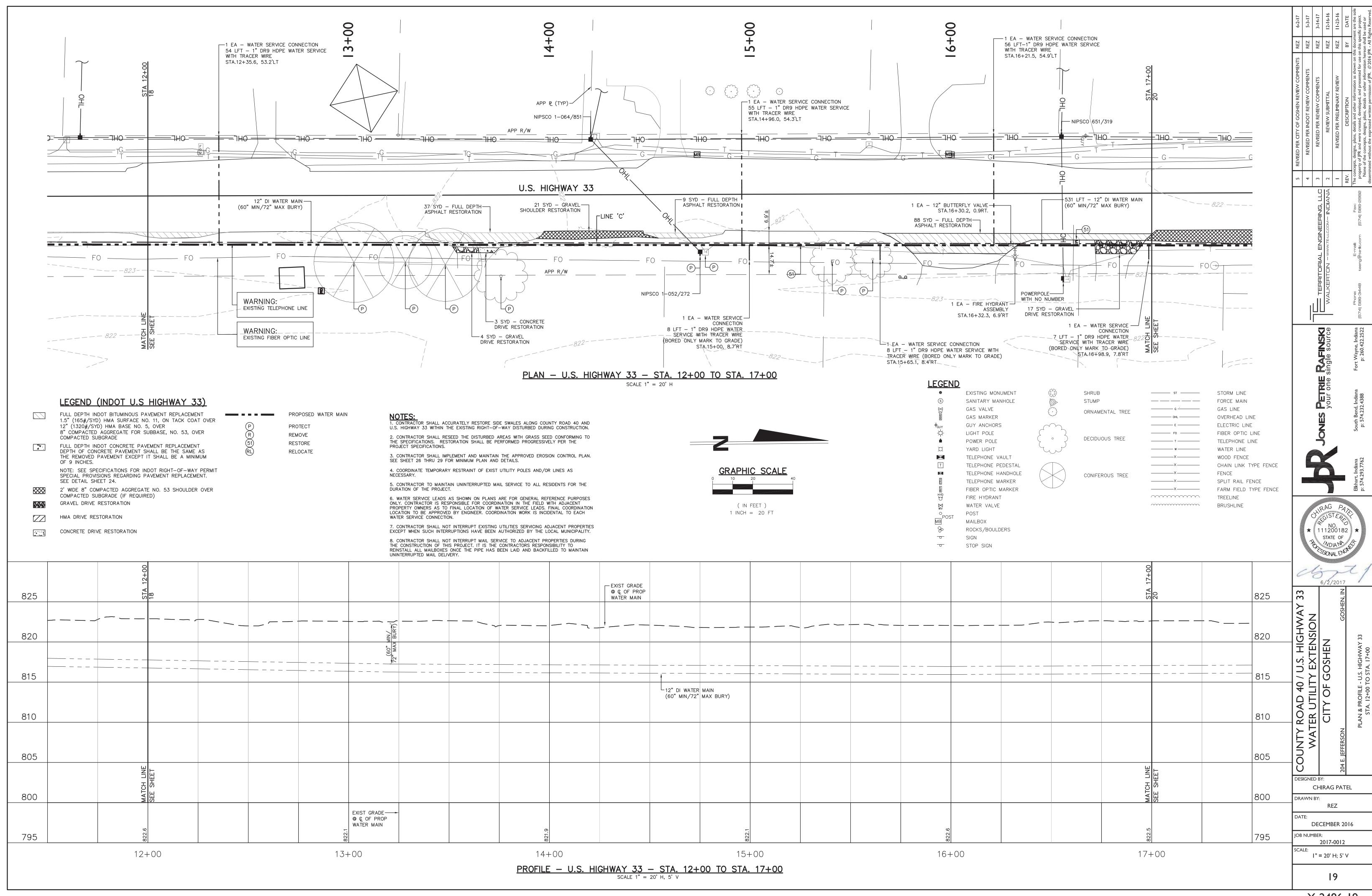


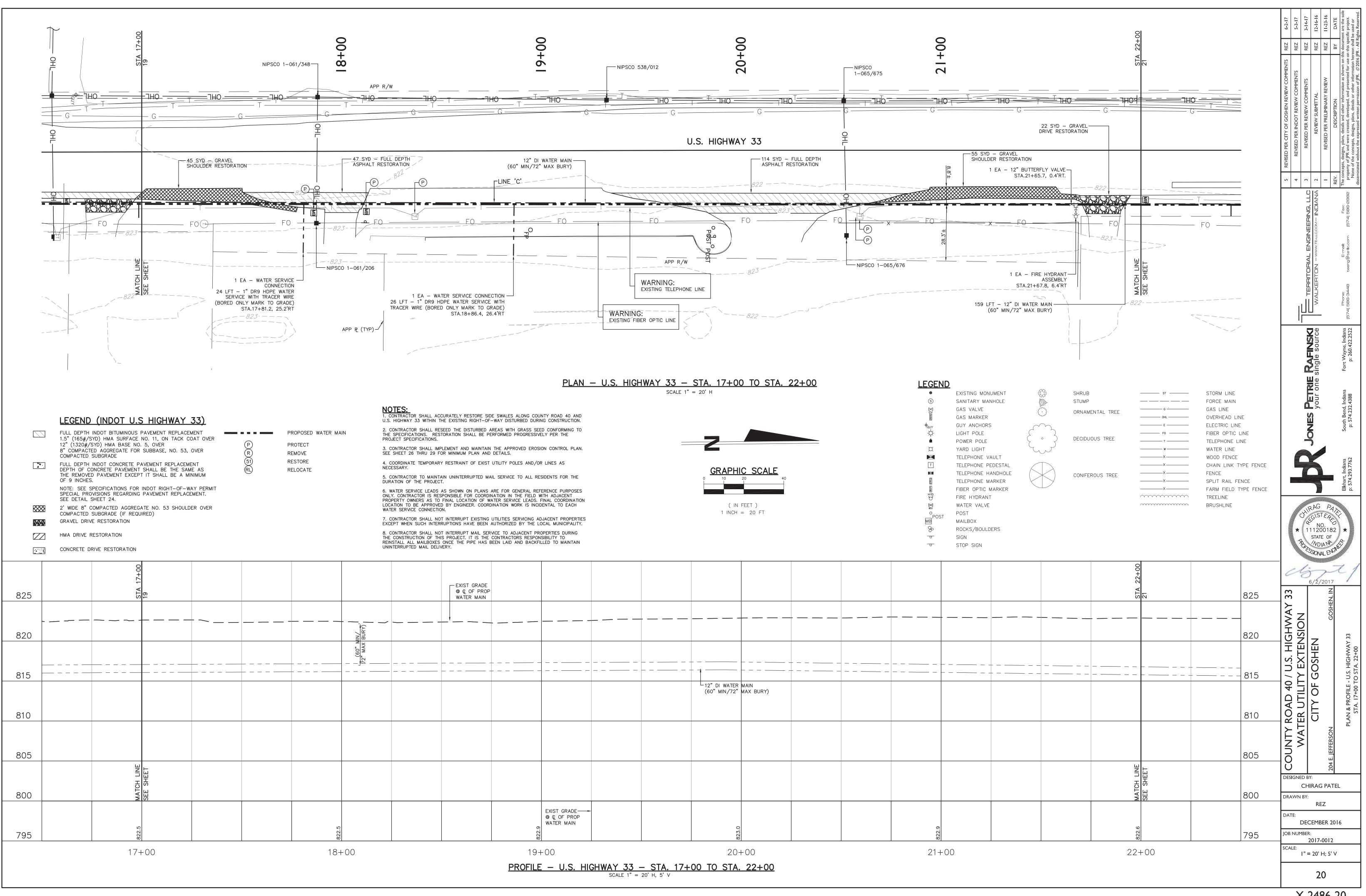


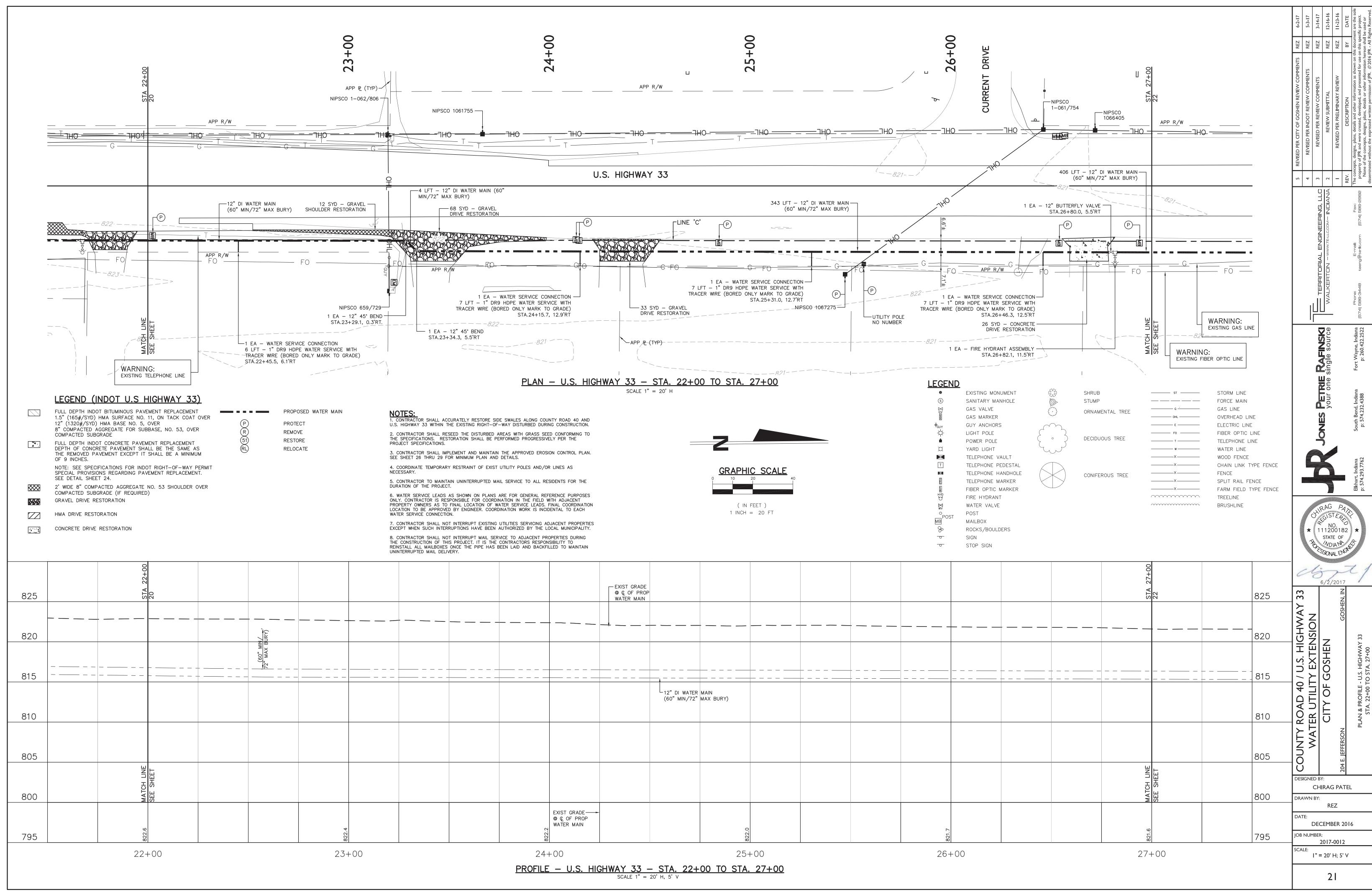


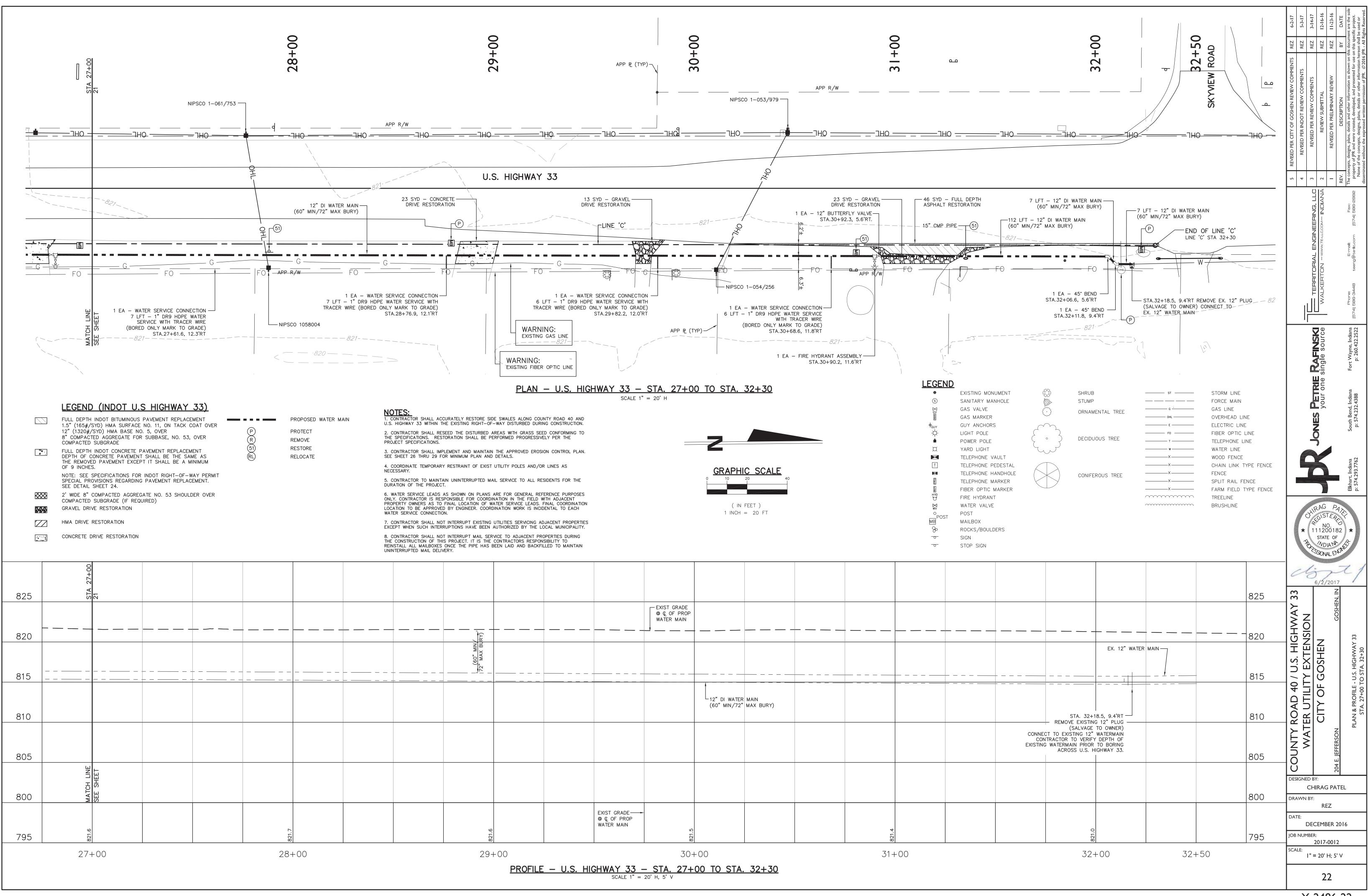


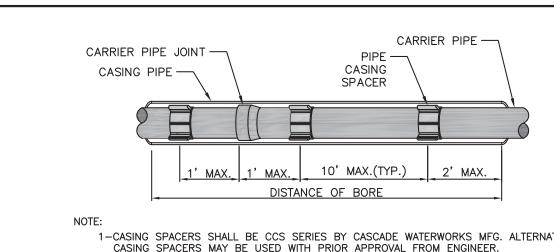








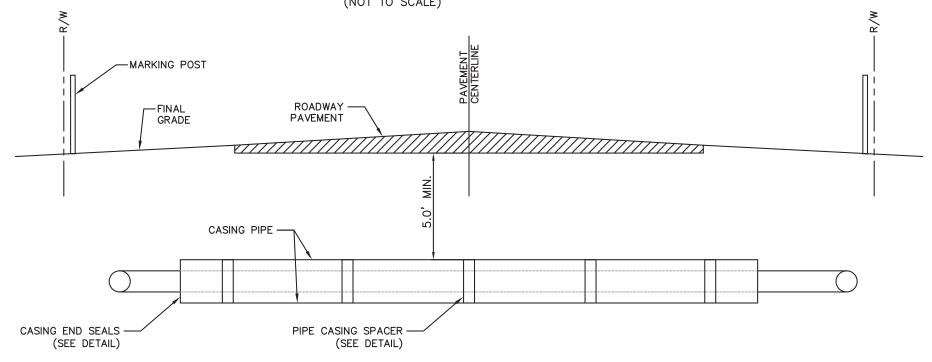




1—CASING SPACERS SHALL BE CCS SERIES BY CASCADE WATERWORKS MFG. ALTERNATIVE CASING SPACERS MAY BE USED WITH PRIOR APPROVAL FROM ENGINEER.

2—APPROVED CASING SPACERS SHALL BE INSTALLED PER MANUFACTURER'S SPECIFICATIONS.

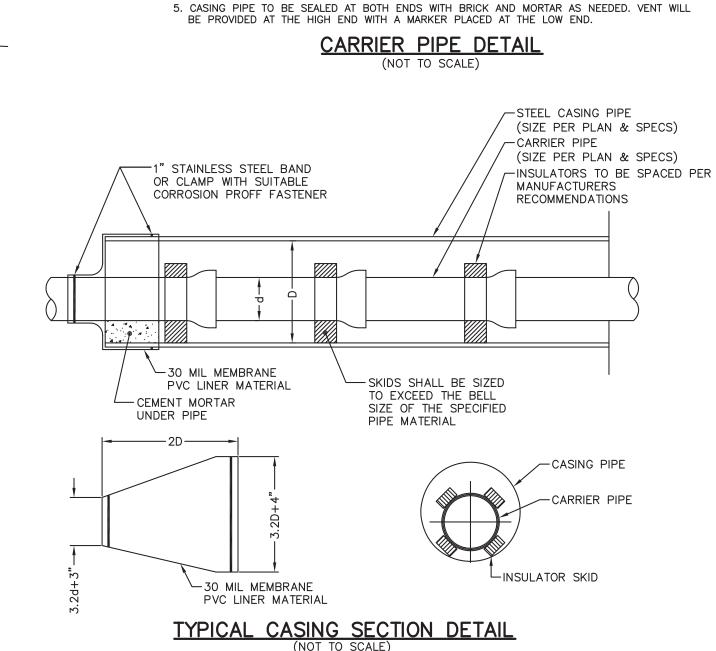
### CASING SPACER DETAIL



- WELDING:
  1. STEEL CASING SECTIONS SHALL BE CONNECTED BY WELDING. WELD SHALL CONFORM TO AWWA C206.
- NOTE:

  1. ALL PIPE JOINTS WITHIN THE CASING ARE TO BE RESTAINED.
- 2. TRACING WIRE TO BE INSTALLED THROUGH ALL CASED BORINGS AND CONNECTED TO MARKING POST.
- 3. STEEL PIPE CASING SHALL CONFORM TO THE REQUIREMENTS OF ASTM A283, GRADE B, C, OR D. ALL JOINTS SHALL BE WELDED. ALL WELDING SHALL BE PERFORMED IN ACCORDANCE WITH AWWA C206. COATING FOR STEEL CASING IS NOT
- 4. STEEL PIPE CASING SHALL BE INSTALLED SYMMETRICAL ABOUT WATER MAIN CENTERLINE (TYP.). PIPE CASING SHALL BE LAID TRUE TO LINE AND GRADE WITH NO BENDS OR CHANGES IN GRADE FOR THE FULL LENGTH OF THE CASING.

### JACK AND BORE CASING PIPE DETAIL



CASING PIPE ID=7.51"

1. CARRIER PIPE SHALL BE CENTERED WITHIN CASING BY USE OF MODEL CCS STAINLESS

3. CASING PIPE SHALL ALWAYS BE AT LEAST 6" LONGER THAN AUGUR TO PREVENT AUGUR

2. ALL WORK PERFORMED SHALL CONFORM TO THE APPLICABLE INDOT STANDARDS.

JONWS PETRIE RAFINSKI CORP

ELKHART, IN, 46516 PH.#574-293-7762

200 NIBCO PARKWAY, SUITE 200

STEEL/POLYMER SPACERS BY CASCADE WATERWORKS MFG. CO., OR EQUIVALENT. NO WOOD

ENDS BLOCKED UP SUCH

CCS STAINLESS

STEEL/POLYMER

SPACERS (TYP.)

SKIDS SHALL BE ALLOWED.

FROM EXTENDING BEYOND END.

4. CONTACT PERSON: CHIRAG PATEL, PE

AS TO PREVENT ENTRANCE

OF FOREIGN MATERIALS, BUT-ALLOWING LEAKAGE TO PASS IN THE EVENT OF A CARRIER PIPE BREAK. GREATER THAN MAX OD OF

DUCTILE IRON CARRIER PIPE

<u>LEGEND</u>

EXISTING MONUMENT SANITARY MANHOLE GAS VALVE GAS MARKER GUY ANCHORS LIGHT POLE POWER POLE YARD LIGHT TELEPHONE VAULT TELEPHONE PEDESTAL TELEPHONE HANDHOLE TELEPHONE MARKER FIBER OPTIC MARKER FIRE HYDRANT WATER VALVE POST MAILBOX ROCKS/BOULDERS

FIRE HYDRANT
WATER VALVE
POST
MAILBOX
ROCKS/BOULDERS
SIGN
STOP SIGN
SHRUB
STUMP

ORNAMENTAL TREE

DECIDUOUS TREE

CONIFEROUS TREE

ST STORM LINE
FM FORCE MAIN
GAS LINE
OVERHEAD LINE
ELECTRIC LINE
FO FIBER OPTIC LINE
TELEPHONE LINE
WATER LINE
WOOD FENCE
CHAIN LINK TYPE FENCE
FENCE

 $\cdots \cdots \cdots$ 

······

SPLIT RAIL FENCE

TREELINE

BRUSHLINE

FARM FIELD TYPE FENCE

General Notes:

1.) Contractor to coordinate temporary restraint of existing utility poles and/or lines as necessary.

2.) Overhead lines consist of electric, telephone, and cable.

3.) The contractor is responsible for the means and methods of construction and for conditions at the site. these plans, prepared by Jones Petrie and Rafinski, Corp. and Territorial Engineering LLC, do not extend to or include systems pertaining to the safety of the construction contractor or their employees, agents or representatives in the performance of the work. the seal of the engineer hereon does not extend to any such safety systems that may now or hereafter be incorporated into these plans. the construction contractor shall prepare or obtain the appropriate safety systems which may be required by the U.S. Occupational Safety and Health Administration (ASHA), INDOT, and or local regulations. all costs associated with complying with osha, state, or local regulations are incidental to the work performed.

4.) Site work shall be constructed from a complete set of approved plans and specifications. not all features are detailed on every plan. the engineer is to be notified of any conflicts within the plans and/or specifications.

5.) Prior to submitting a bid proposal it shall be the contractor's responsibility to either conduct any additional field exploration or acquire any additional geotechnical assistance required to estimate the amount of unsuitable material that will require removal and/or to estimate the amount of off—site borrow or topsoil that will be required.

6.) The contractor shall provide and maintain traffic devices for protection of vehicles and pedestrians consisting of drums, barriers, signs, lights, fences or other means as required. maintain traffic protection is incedental to this work.

7.) Information on existing utilities has been compiled from available information including utility company and municipal record maps and/or field survey and is not guaranteed correct or complete. utilities including storm drainage, water, phone, electric, gas and cable are shown to alert the contractor to their presence.

8.) The contractor shall visit the site and verify the elevation and location of all utilities by various means prior to beginning any excavation. the contractor shall notify the engineer in the event of any discovered or unforeseen conflicts between existing and proposed utilities so that an appropriate modification can be made.

9.) The contractor shall exercise caution when working near those existing utilities not noted for demolition or removal. no claims for damages or extra compensation shall accrue to the contractor from the presence of underground obstructions, or from any delay due to the removal or rearrangement of the same.

10.) Prior to demolition or construction the contractor shall contact 811 at least 48 hours before commencement of work. all non-member utilities shall be contacted directly by the contractor.

11.) Contractor shall not interrupt existing utilities servicing adjacent properties except when such interruptions have been authorized in writing by the local municipality or the affected utility.

12.) The contractor shall arrange for and coordinate work to be performed by utility companies including connections, disconnections, relocations, inspections, installations, street cuts and demolition. all excavated material for new utility installations or relocations that are located beneath new pavement locations shall be backfilled with grade "b" borrow and compacted per

13.) Excess excavated material not suited for backfill for trenches or pavement shall be transported to an area provided offsite by the contractor.

14.) Topsoil shall not be removed from site. excess topsoil not used for finish grading shall be stockpiled in areas shown.

SEE SPECIFICATIONS FOR

INDOT RIGHT-OFWAY PERMIT

SPECIAL PROVISIONS

15.) All existing pavement where utility piping or conduit is to be installed or will match existing pavements shall be saw cut.

16.) The contractor is responsible for the protection of survey control points, benchmarks, and property monuments. if a monument is disturbed, the contractor shall contract with the surveyor of record or an indiana registered land surveyor for re—installation of the

17.) Volumes of cut and fill materials do not take into consideration material densities before or after excavation or compaction. contractor to account for volumes when preparing bid

18.) The contractor is responsible for proper disposal of all construction debris in accordance to all governing bodies/agencies. the contractor shall clean up all debris and materials resulting from the operation and restore all surfaces, structures, and property not included with these improvements to its original condition to the satisfaction of owner and engineer.

19.) The contractor shall maintain safe, clearly marked, access to all adjacent properties throughout the entire project duration. this includes access for farm machinery. in doing so the contractor shall also maintain existing drainage ditches open without any obstructions.

20.) Limited construction operations to occur within travel ways of county road 40 at anytime during this project. prior approval by engineer is required.

21.) "or equal" or "or equivalent"clause
Whenever a material, article, or piece of equipment is identified in the contract documents by reference to manufacturers' or vendors' names, trade names, catalogue numbers, etc., it is intended merely to establish a standard any material, article, or equipment of other manufacturers and vendors that will perform adequately the duties imposed by the general design will be considered equally acceptable provided the material, article, or equipment so proposed is, in the opinion of the engineer, of equivalent substance and function. however,

such substitution material, article, or equipment shall not be purchased or installed by the

contractor without the engineer's written approval.

0 0 TRAVEL LANE -EDGE OF PAVEMENT dLINE 'C' APP R/W APP R/W LINE 'A JACK AND BORE LAUNCHING PIT 35'Lx12'Wx8'D± COUNTY ROAD 40 -JACK AND BORE 80/LF JACK AND BORE REÇEIVING PIT OF 28" STEEL CASING 12'Lx12'Wx8'D PIPE WITH 16" D.I. WATER NIPSCO 657577 EDGE OF PAVEMENT GRAPHIC SCALE PLAN - JACK AND BORE U.S. HIGHWAY 33

LEGEND (INDOT U.S HIGHWAY 33)

FULL DEPTH INDOT BITUMINOUS PAVEMENT REPLACEMENT

1.5" (165#/SYD) HMA SURFACE NO. 11, ON TACK COAT OVER

12" (1320#/SYD) HMA BASE NO. 5, OVER

8" COMPACTED AGGREGATE FOR SUBBASE, NO. 53, OVER

COMPACTED SUBGRADE

FULL DEPTH INDOT CONCRETE PAVEMENT REPLACEMENT

PROPOSED WATER MAIN

REMOVE

RESTORE

DEPTH OF CONCRETE PAVEMENT SHALL BE THE SAME AS
THE REMOVED PAVEMENT EXCEPT IT SHALL BE A MINIMUM
OF 9 INCHES.

NOTE: SEE SPECIFICATIONS FOR INDOT RIGHT—OF—WAY PERMIT
SPECIAL PROVISIONS REGARDING PAVEMENT REPLACEMENT.

SPECIAL PROVISIONS REGARDING PAVEMENT REPLACEMENT.

SEE DETAIL SHEET 24.

2' WIDE 8' COMPACTED AGGREGATE NO. 53 SHOULDER OVER COMPACTED SUBGRADE (IF REQUIRED)

GRAVEL DRIVE RESTORATION

HMA DRIVE RESTORATION

CONCRETE DRIVE RESTORATION

NOTES:

1. CONTRACTOR SHALL ACCURATELY RESTORE SIDE SWALES ALONG COUNTY ROAD 40 AND U.S. HIGHWAY 33 WITHIN THE EXISTING RIGHT—OF—WAY DISTURBED DURING CONSTRUCTION.

2. CONTRACTOR SHALL RESEED THE DISTURBED AREAS WITH GRASS SEED CONFORMING TO THE SPECIFICATIONS. RESTORATION SHALL BE PERFORMED PROGRESSIVELY PER THE PROJECT SPECIFICATIONS.

3. CONTRACTOR SHALL IMPLEMENT AND MAINTAIN THE APPROVED EROSION CONTROL PLAN. SEE SHEET 26 THRU 29 FOR MINIMUM PLAN AND DETAILS.

4. COORDINATE TEMPORARY RESTRAINT OF EXIST UTILITY POLES AND/OR LINES AS

( IN FEET )

1 INCH = 20 FT

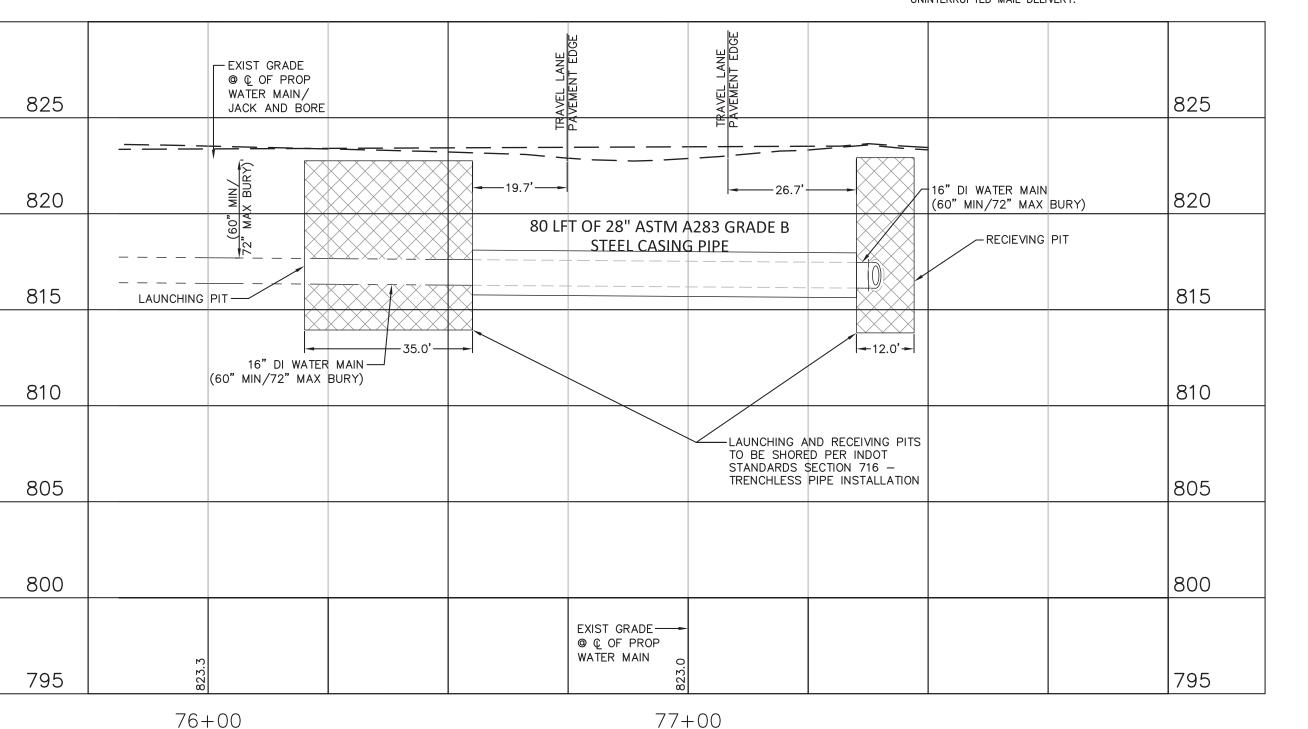
5. CONTRACTOR TO MAINTAIN UNINTERRUPTED MAIL SERVICE TO ALL RESIDENTS FOR THE DURATION OF THE PROJECT.

6. WATER SERVICE LEADS AS SHOWN ON PLANS ARE FOR GENERAL REFERENCE PURPOSES ONLY. CONTRACTOR IS RESPONSIBLE FOR COORDINATION IN THE FIELD WITH ADJACENT PROPERTY OWNERS AS TO FINAL LOCATION OF WATER SERVICE LEADS. FINAL COORDINATION LOCATION TO BE APPROVED BY ENGINEER. COORDINATION WORK IS INCIDENTAL TO EACH

WATER SERVICE CONNECTION.

7. CONTRACTOR SHALL NOT INTERRUPT EXISTING UTILITIES SERVICING ADJACENT PROPERTIES EXCEPT WHEN SUCH INTERRUPTIONS HAVE BEEN AUTHORIZED BY THE LOCAL MUNICIPALITY.

8. CONTRACTOR SHALL NOT INTERRUPT MAIL SERVICE TO ADJACENT PROPERTIES DURING THE CONSTRUCTION OF THIS PROJECT. IT IS THE CONTRACTORS RESPONSIBILITY TO REINSTALL ALL MAILBOXES ONCE THE PIPE HAS BEEN LAID AND BACKFILLED TO MAINTAIN UNINTERRUPTED MAIL DELIVERY.



SCALE 1" = 20' H

PROFILE - JACK AND BORE U.S. HIGHWAY 33

23 X-2486-23

DESIGNED BY:

CHIRAG PATEL

DRAWN BY:

REZ

DATE:

DECEMBER 2016

NO. NO. ★ 111200182

BILL VOIA VALLE

STATE OF

5/2/2017

U.S. HIGHWA C EXTENSION SOSHEN

2017-0012 SCALE: I" = 20' H; 5' V

