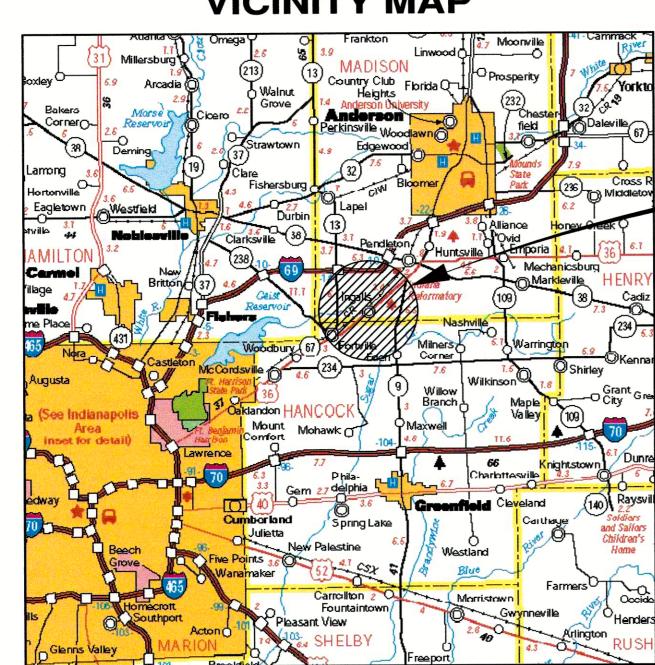
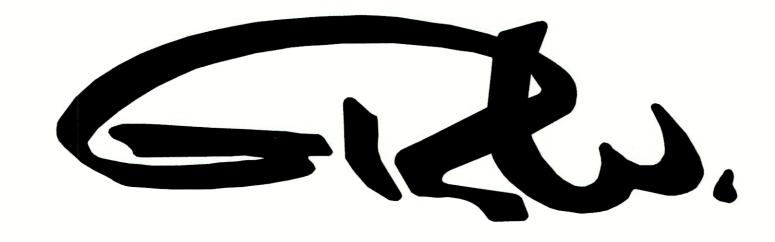
FALL CREEK REGIONAL WASTE DISTRICT PENDLETON, INDIANA INGALLS FORCE MAIN

VICINITY MAP



PROJECT LOCATION

REPLACEMENT

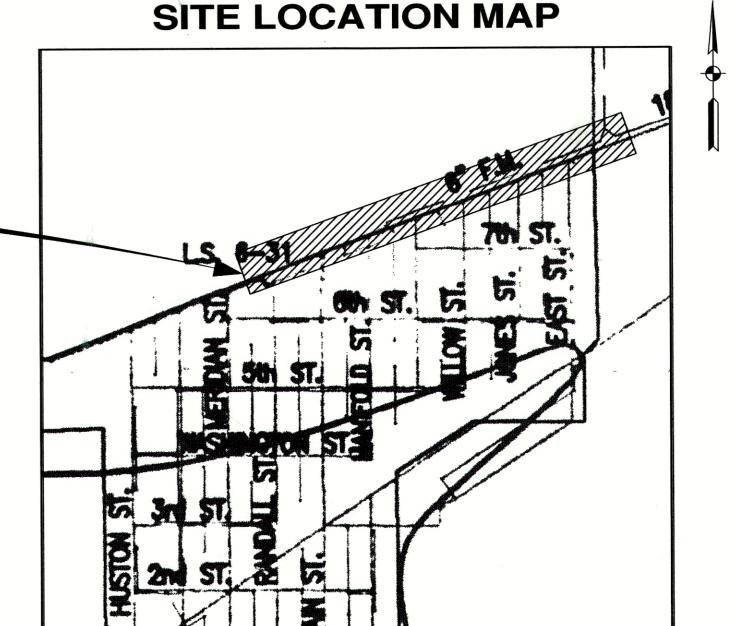


GRW Engineers, Inc.

7112 Waldemar Drive Indianapolis, Indiana 46268 (317) 347-3650

INDIANAPOLIS, INDIANA
LOUISVILLE & LEXINGTON, KENTUCKY
CINCINNATI, OHIO
KNOXVILLE & NASHVILLE, TENNESSEE
ARLINGTON, TEXAS

OCTOBER 2005



| SHEET INDEX | | | | |
|-------------|--------------------------------------|--|--|--|
| NO. | DESCRIPTION | | | |
| C-01 | COVER SHEET | | | |
| C-02 | INDEX/ GENERAL NOTES | | | |
| C-03 | PLAN AND PROFILE STA. 10+00 TO 18+50 | | | |
| C-04 | PLAN AND PROFILE STA. 18+50 TO 27+50 | | | |
| C-05 | PLAN AND PROFILE STA. 27+50 TO 35+80 | | | |
| C-06 | DETAIL SHEET | | | |
| C-07 | EROSION CONTROL DETAIL SHEET | | | |

FCRWD MEMBERS

MORRIS E. Mc CURDY - PRESIDENT

MARK A. JABLONSKI - VICE PRESIDENT

AGON D. TOLBERT - SECRETARY

DAVID K. PADGETT

DOUGLAS S. Mc GEE - TREASURER

GREGORY L. VALENTINE - BOARD MEMBER

BOARD MEMBER

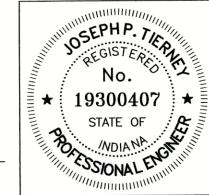
TIMOTHY E. GREEN - BOARD MEMBER

EDWARD L. STERGAR, JR. - BOARD MEMBER

JOE ROWLETT - GENERAL MANAGER

CHRIS JANAK - ATTORNEY





SYMBOLS

| | CHI VERT DIRE | | |
|--|---|---------------------------|---|
| | CULVERT PIPE | | APPROXIMATE SOLID ROCK |
| | ROAD/DRIVE RESTORATION REQUIRED EXISTING BASINS & STRUCTURES | $\overline{\Lambda}$ | ELEVATION-NO GUARANTEE OF ACCURACY OR ADEQUACY SEE SPECIFICATIONS |
| | TO REMAIN IN SERVICE | <u>NR</u> | DEPTH OF SOUNDING NO ROCK ENCOUNTERED |
| | NEW BASINS & STRUCTURES | ⊕ _{BM #1} | BENCHMARK AND NUMBER |
| | NEW SIDEWALKS & CONCRETE | BM #1 ⊛ | IRON PIPE |
| | NEW GRAVEL/CRUSHED STONE | - | FIRE HYDRANT |
| • | NEW MANHOLE | | STORM INLET / CATCH BASIN |
| | NEW PIPING & FLOW DIRECTION | Δ | RAILROAD SPIKE |
| /////////////////////////////////////// | PIPING TO BE ABANDONED | 0 | CLEANOUT |
| ~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~ | HEDGE/TREE LINE | | SPECIAL BACKFILL |
| a aaaaaaaa | STONE WALL | | AS SPECIFIED |
| | WALL (CONCRETE DIOCK | | PROPERTY LINE PIN FOUND |
| | WALL (CONCRETE BLOCK, BRICK, ETC.) | | POST |
| £ | DRAIN AND DIRECTION OF FLOW | С | CATV PEDESTAL |
| | | (C) | ROADWAY SIGN SEPTIC CLEANOUT |
| CONC. | ROAD W/ CONC. PAVING | R | RIGHT OF WAY MARKER |
| SPH. | ROAD W/ ASPHALT PAVING | M | WATER METER |
|) ——— | GUY WIRE & ANCHOR | M | MAILBOX |
| | FENCE W (CATE (NEW) | Ø | POWER POLE |
| X | FENCE W/GATE (NEW) | \ | LIGHT POLE |
| × × | FENCE W/GATE (EXISTING) | Q | YARD HYDRANT |
| R OR APP. P.L. | APPARENT PROPERTY LINE | △ CP 1 | CONTROL POINT |
| 752.9 | FINISHED SPOT ELEVATION | | TREE (CONIFEROUS) |
| 752.9 | EXISTING SPOT ELEVATION | | TREE (DECIDUOUS) |
| 758 | FINAL GRADE | - E/P - | EDGE OF PAVEMENT |
| 754 | EXISTING GRADE | T | TELEPHONE PEDESTAL |
| ——Е—— | UNDERGROUND ELECTRIC | | WELL |
| R & R | RAILROAD | ⊗ SB #1 | |
| 12"_RCP | EXIST. STORM SEWER MAIN | • ** | SOIL BORING AND NUMBER |
| 12"_RCP | EXIST. SANITARY SEWER | | STUMP |
| G | GAS MAIN | (G) | GAS MARKER |
| W | WATER MAIN | GM | GAS METER |
| | TELEPHONE LINE | | VALVE |
| | EXIST. PIPING TO REMAIN IN SERVICE | | SIDEWALK |
| | GUARDRAIL | | |
| | FIBER OPTIC COMMUNICATIONS CABLE | | AIR RELEASE VALVE |
| xxxxxxxxxxxx | FENCE LINE | | |
| | | | |

RIGHT OF WAY

CENTERLINE

NOTES:

UTILITY CONTACTS

INDIANA GAS COMPANY 2001 LOUISE STREET ANDERSON, IN. 46016 CONTACT: MR. MIKE JOHNSON TEL. (317)-592-4500

1191 RICH ROAD RICHMOND, IN. 47374 CONTACT: MS. JOANN ANTHONY (317) - 984 - 2251

TCI CABLE 335 EAST 10TH STREET ANDERSON, IN. 46016 CONTACT: MR. ROCKEY BENNETT (765)-649-5228

CINERGY / PSI 100 MILL CREEK ROAD NOBLESVILLE, IN. 46060 CONTACT: MR. TRACEY GRADY (317)776 - 5352

CENTRAL INDIANA POWER 2243 EAST MAIN ST. GREENFIELD, IN. 46140 CONTACT: MR. GARY SARGENT

INGALLS WATER 249 NORTH MERIDIAN ST. INGALLS, IN. 46048 CONTACT: MR. RANDY McVEY (317)-485-4321

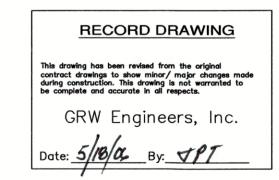
50 NORTH JACKSON ST. FRANKLIN, IN. 46131 CONTACT: MS. NANCY PICKEREL (317) - 736 - 5309

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. THE DISTRICT ASSUMES NO RESPONSIBILITY FOR THE LACK OF LOCATION OR MISSED LOCATION OF EXISTING UTILITIES.
- 3. 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 1-800-382-5544
- 4. 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.
- 5. ALL MANHOLE RIM ELEVATIONS ARE APPROXIMATE. RIMS SHALL BE SET FLUSH WITH GRADE UNLESS OTHERWISE NOTED.
- 6. THE CONTRACTOR SHALL MAINTAIN A MINIMUM OF 10' HORIZONTAL SEPARATION BETWEEN THE PROPOSED SEWER AND EXISTING WATER LINES. CROSSING SHALL MAINTAIN A MINIMUM OF 18" VERTICAL CLEARANCE WITH THE SEWER BELOW THE WATER LINE WHEN POSSIBLE.
- 7. ALL AIR RELEASE STRUCTURES LOCATIONS INDICATED ON THE PLANS ARE SHOWN AS APPROXIMATE LOCATIONS AND THE EXACT LOCATIONS WILL BE DETERMINED IN THE FIELD BY THE CONTRACTOR AND APPROVED BY THE ENGINEER.
- 8. STREET LINES AND PROPERTY LINES SHOWN ON THIS PLAN ARE NOT THE RESULT OF DEED RESEARCH AND ARE TO BE CONSIDERED APPROXIMATE AND FOR REFERENCE ONLY.
- 9. BASELINE STATIONING IS ALONG THE CENTERLINE OF PROPOSED SEWER.
- 10. ALL EXISTING SIZES AND INVERTS 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.
- 11. ALL INFORMATION REGARDING HORIZONTAL AND VERTICAL CONTROL ARE BASED ON BEST INFORMATION AVAILABLE UTILIZING RECORD DRAWINGS OF THE SITE. THE ENGINEER DOES NOT GUARANTEE OR ASSURE THAT SUCH INFORMATION IS TRUE. THE CONTRACTOR SHALL DETERMINE WHICH CONTROLS CONFLICT WITH HIS WORK AND VERIFY THOSE ELEVATIONS, ETC. AND ADJUST HIS WORK ACCORDINGLY TO MAINTAIN PROPOSED ELEVATIONS RELATIVE TO THOSE VERIFIED, AND NOTIFY THE ENGINEER OF ANY SUCH CHANGE FOR APPROVAL.
- 12. THE ENGINEER SHALL BE NOTIFIED OF ANY FIELD TILES FOUND DURING CONSTRUCTION OPERATIONS. ANY SUCH TILE THAT IS DAMAGED SHALL BE REPAIRED AT CONTRACTORS EXPENSE.
- 13. ALL UTILITY LOCATIONS ARE APPROXIMATE. IT IS THE CONTRACTOR'S RESPONSIBILITY TO CONTACT ALL AFFECTED UTILITIES AND LOCAL UTILITIES PROTECTION SERVICE PRIOR TO EXCAVATION (SEE NOTE 3).
- 14. 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.
- 15. CONTRACTOR SHALL USE CAUTION IN THE INSTALLATION OF NEW EQUIPMENT SO AS TO NOT DAMAGE EXISTING UTILITIES, ETC. CONTRACTOR IS RESPONSIBLE FOR REPAIR AND/OR REPLACEMENT OF ANY EQUIPMENT OR UTILITIES DAMAGED AS A RESULT OF CONTRACTOR'S CONSTRUCTION OPERATIONS
- 16. CONNECTIONS OF ROOF DRAINS, FOUNDATION DRAINS AND ANY OTHER CLEAN WATER CONNECTIONS TO THE SANITARY SEWER SYSTEMS ARE PROHIBITED.
- 17. THE CONTRACTOR IS RESPONSIBLE FOR ENSURING CONTINUED OPERATION OF THE EXISTING SEPTIC SYSTEMS DURING CONSTRUCTION.
- 18. LIMITS OF CONSTRUCTION SHALL BE MAINTAINED WITHIN PERMANENT AND TEMPORARY EASEMENTS AS SHOWN ON PLANS.
- 19. TAKE PRECAUTION AS NECESSARY TO PREVENT DAMAGE TO ANY EXISTING TREES AND THEIR ROOT SYSTEMS. IF NECESSARY, BORE UNDER ROOT SYSTEM TO PREVENT POSSIBLE FUTURE DAMAGE TO TREE GROWTH AND SURVIVAL.
- 20. CONTRACTOR SHALL COORDINATE BYPASS PUMPING EFFORTS WITH FALL CREEK REGIONAL WASTE DISTRICT.

BENCHMARK INFO

- 1. CONTROL POINT 1000: CHISELED "X" IN NORTHSIDE OF WETWELL ON SOUTHSIDE OF REFORMATORY RD. EL. 849.27
- 2. TBM#1: MAG NAIL 1' UP IN UTILITY POLE ON THE NORTHEAST CORNER OF REFÖRMATORY RD. AND COUNTY ROAD 650 WEST. EL 864.48





"DON'T DIG BLIND"

FALL CREEK REGIONAL WASTE DISTRICT PENDELTON, INDIANA INGALLS FORCE MAIN REPLACEMENT

INDEX/GENERAL NOTES

★ 19300407 STATE OF



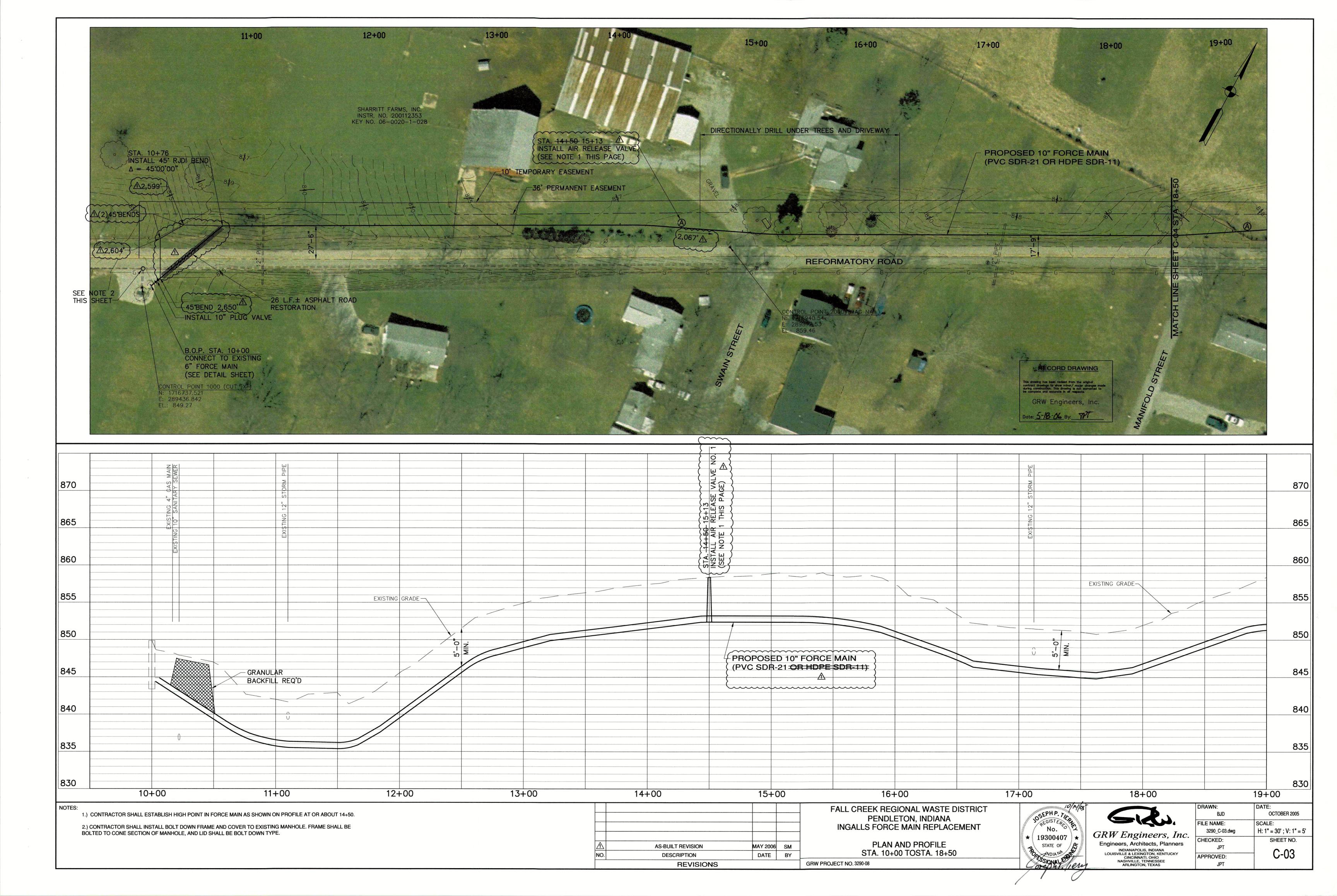
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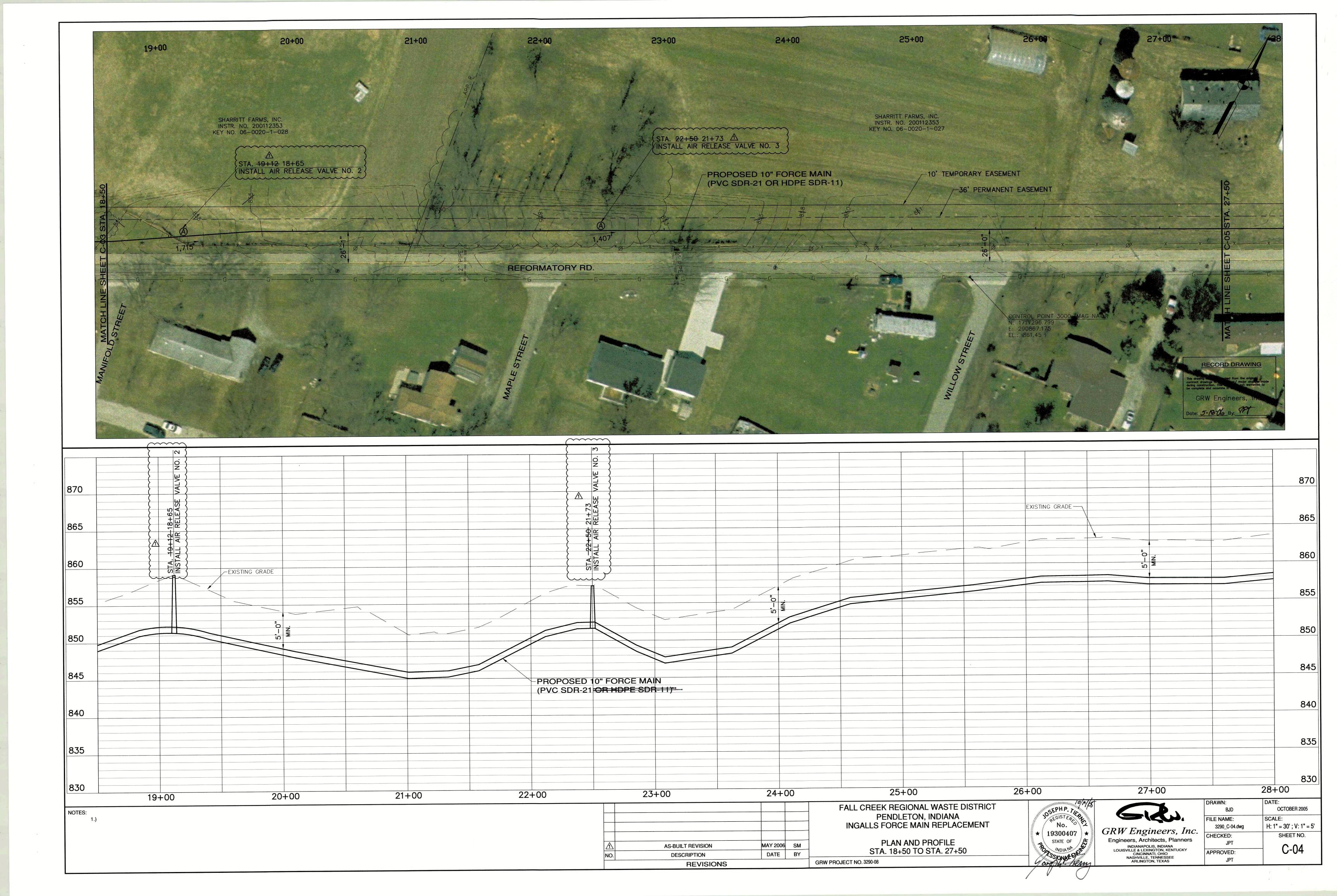
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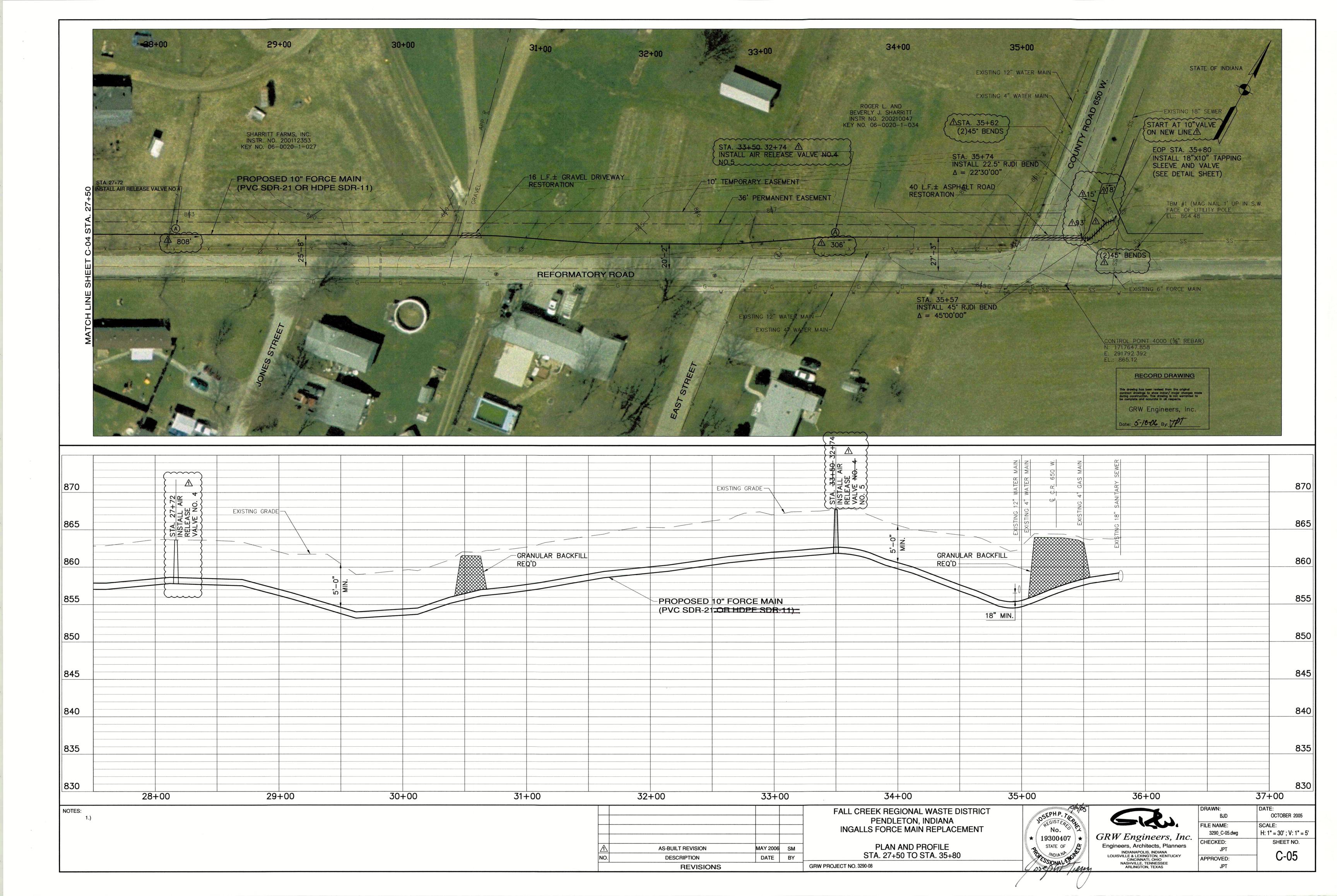
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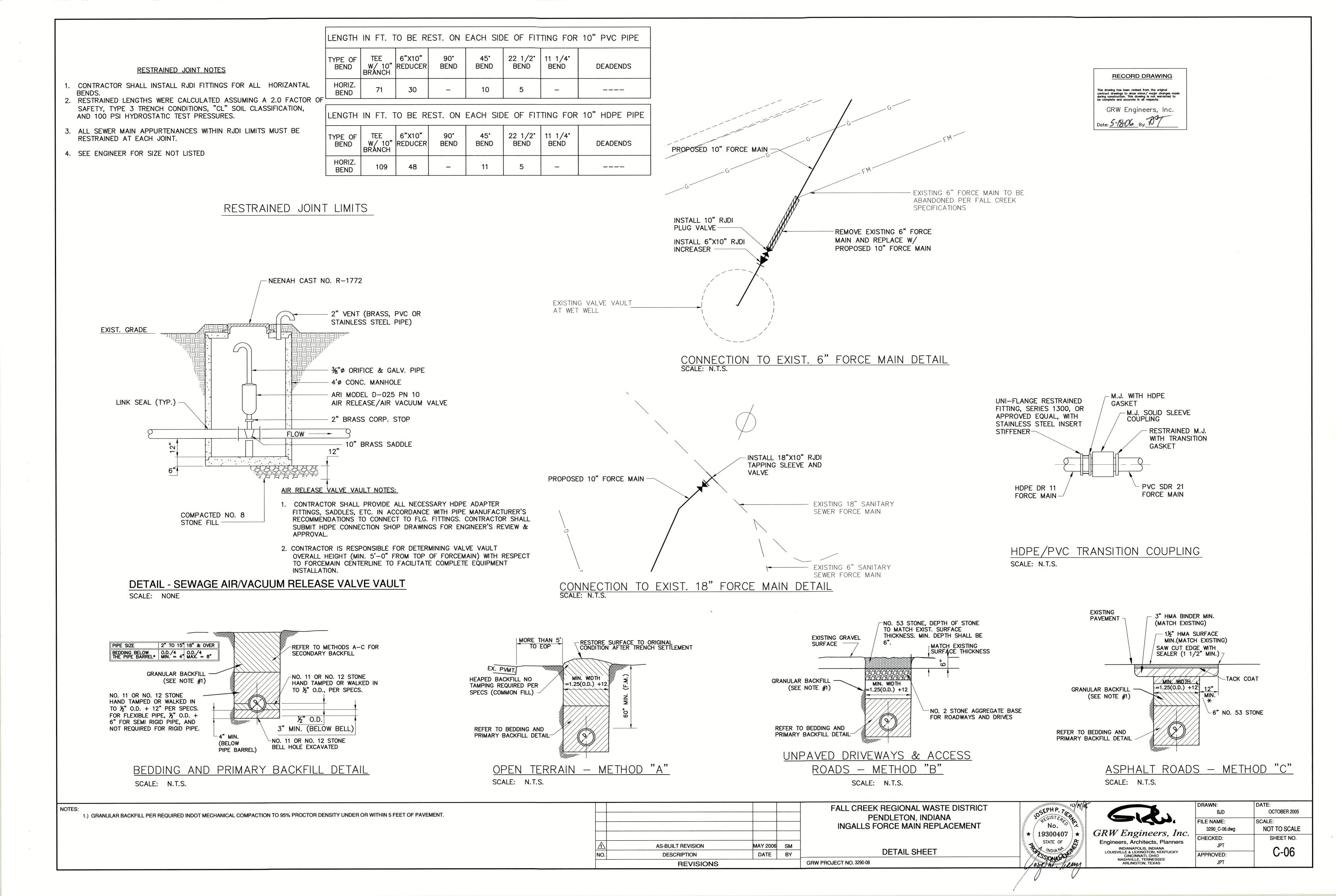
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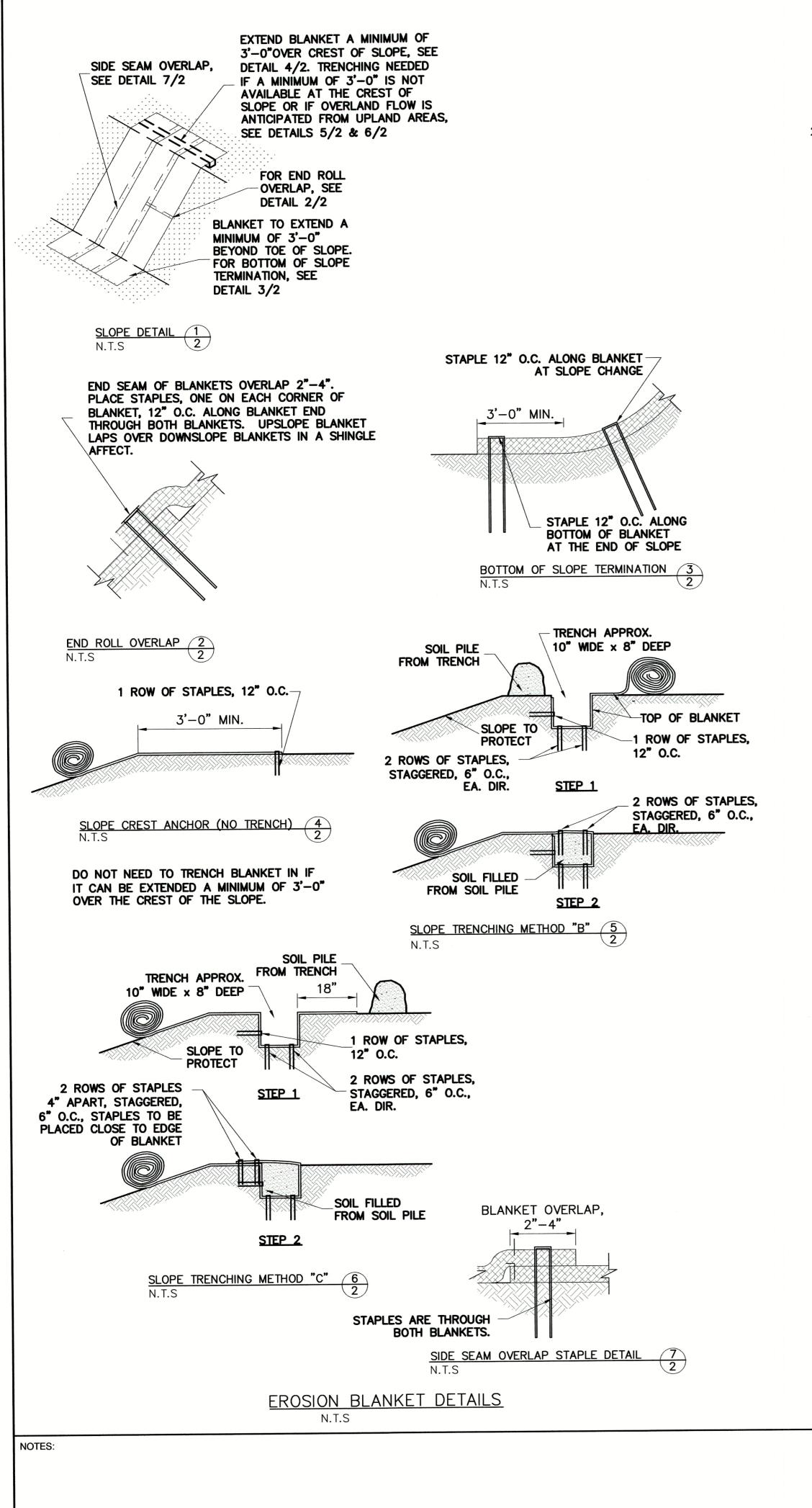
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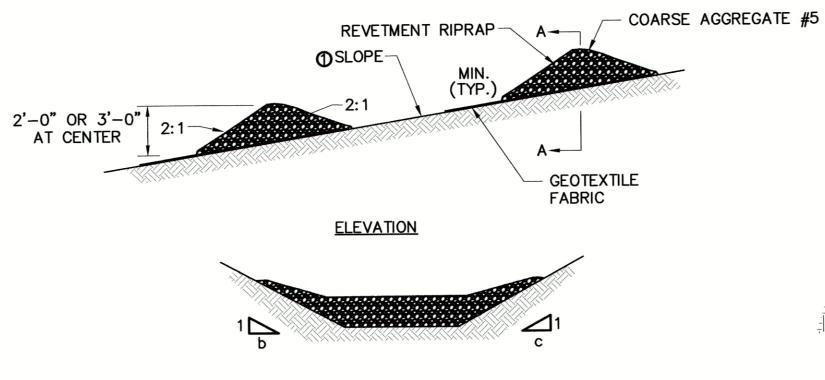


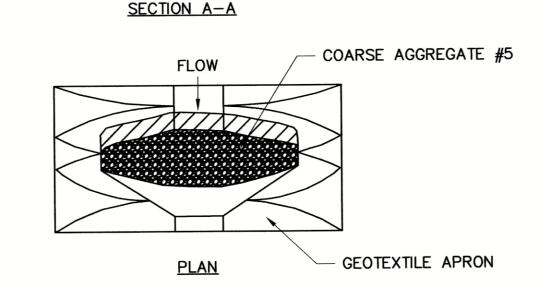






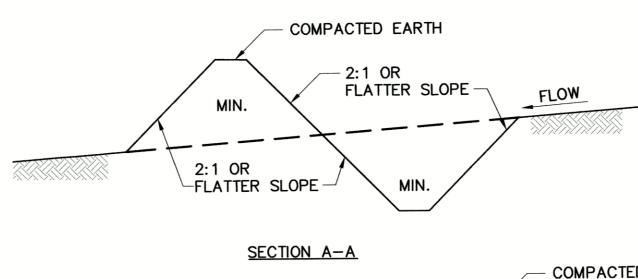


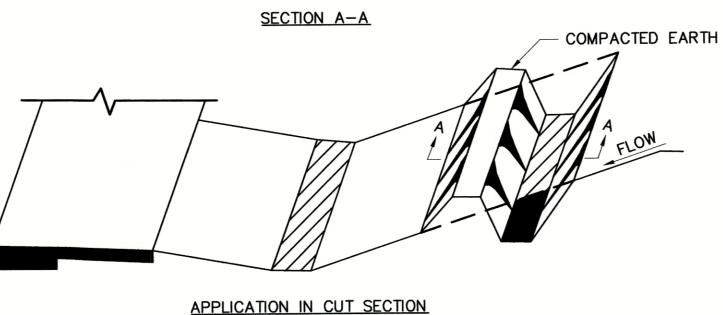


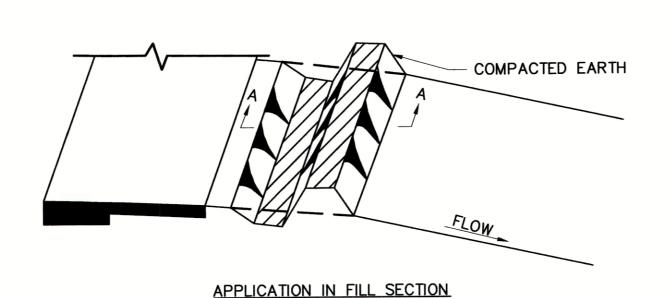


TEMPORARY CHECK DAM

- 1. RIPRAP DITCH CHECK DAMS SHALL BE SPACED SUCH THAT THE TOPOF THE DOWNSTREAM CHECK DAM IS AT THE SAME ELEVATION AS THE TOE OF THE ADJACENT UPSTREAM CHECK DAM.
- 2. THE VOLUME OF COARSE AGGREGATE #5 IS 1/27[a + 3(b+c)], CYS.
- 3. THE AREA OF GEOTEXTILE FABRIC IS 1/9[12 +21(b+c)]. SYS.





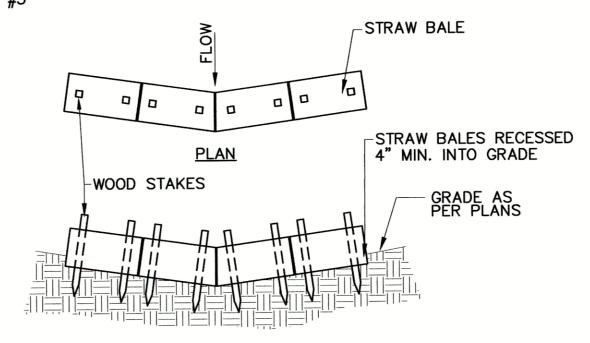


DIVERSION DITCH DETAIL

AS-BUILT REVISION

DESCRIPTION

REVISIONS



ELEVATION

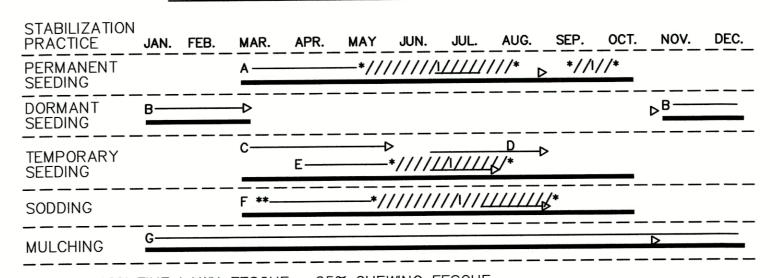
STRAW BALE FILTER

STRAW BALE FILTER

- 1. ALL BALES SHOULD ALL BE EITHER WIRE-BOUND OR STRING-TIED. STRAW BALES SHOULD BE INSTALLED SO THAT BINDINGS ARE ORIENTED AROUND THE SIDES RATHER THAN ALONG THE TOPS AND BOTTOMS OF THE BALES TO PREVENT DETERIORATION OF THE BINDINGS.
- THE BARRIER SHOULD BE ENTRENCHED AND BACKFILLED. A TRENCH SHOULD BE EXCAVATED THE WIDTH OF A BALE AND THE LENGTH OF THE PROPOSED BARRIER TO A MINIMUM DEPTH OF 4 INCHES. AFTER THE BALES ARE STAKED AND CHINKED, THE EXCAVATED SOIL SHOULD BE BACKFILLED AGAINST THE BARRIER. BACKFILL SOIL SHOULD CONFORM TO THE GROUND LEVEL ON THE DOWNHILL SIDE AND SHOULD BE BUILT UP TO 4 INCHES AGAINST THE UPHILL SIDE OF THE BARRIER.
- 3 EACH BALE SHOULD BE SECURELY ANCHORED BY AT LEAST TWO STAKES OF WOOD OR STEEL DRIVEN THROUGH THE BALE. THE FIRST STAKE IN EACH BALE SHOULD BE DRIVEN TOWARD THE PREVIOUSLY LAID BALE TO FORCE THE BALES TOGETHER. STAKES SHOULD BE DRIVEN DEEP ENOUGH INTO THE GROUND TO SECURELY ANCHOR THE BALES.
- THE GAPS BETWEEN BALES SHOULD BE CHINKED (FILLED BY WEDGING) WITH STRAW TO PREVENT WATER FROM ESCAPING BETWEEN THE BALES.
- 5. INSPECTION SHOULD BE FREQUENT AND REPAIR OR REPLACEMENT SHOULD BE MADE PROMPTLY AS NEEDED.
- STRAW BALE BARRIERS SHOULD BE REMOVED WHEN THEY HAVE SERVED THEIR USEFULNESS, BUT NOT BEFORE THE UPSLOPE AREAS HAVE BEEN PERMANENTLY STABILIZED.
- 7. IN SHEET FLOW APPLICATIONS, BALES SHOULD BE PLACED IN A SINGLE ROW, LENGTHWISE ON THE CONTOUR, WITH ENDS OF ADJACENT BALES TIGHTLY ABUTTING ONE ANOTHER.

INB CHANNEL FLOW APPLICATIONS, BALES SHOULD BE PLACED IN A SINGLE ROW, LENGTHWISE, ORIENTED PERPENDICULAR TO THE CONTOUR, WITH ENDS OF ADJACENT BALES TIGHTLY ABUTTING ONE ANOTHER. THE BARRIER SHOULD BE EXTENDED TO SUCH A LENGTH THAT THE BOTTOMS OF THE END BALES ARE HIGHER IN ELEVATION THAN THE TOP OF THE LOWEST MIDDLE BALE TO ASSURE THAT SEDIMENT LADEN RUNOFF WILL BE TRAPPED.

SEASONAL SOIL PROTECTION CHART



- A = 40% FINE LAWN FESCUE; 25% CHEWING FESCUE 20% ITALIAN RYE GRASS; 10% RED TOP; 5% WHITE COVER AT 3LBS PER 1000 SQ. FT. PLUS 3 TONS STRAW MULCH/ACRE
- B = KENTUCKY BLUEGRASS 60 LBS/ACRE; CREEPING RED FESCUE 60 LBS/ACRE, PLUS 3 TONS STRAW MULCH/ACRE, OR ADD ANNUAL RYEGRASS 30 LBS/ACRE.
- C = SPRING OATS 3 BUSHEL/ACRED = WHEAT OR RYE 2 BUSHEL/ACRE
- E = ANNUAL RYEGRASS 40 LBS/ACRE. (1 LB/1000 SQ. FT.)
- F = SOD

MAY 2006 SM

DATE BY

- G = STRAW MULCH 3 TONS/ACRE (ANCHORED)
- *//I//* IRRIGATION NEEDED DURING JUNE, JULY, AND/OR SEPTEMBER.
- ** IRRIGATION NEEDED FOR 2 TO 3 WEEKS AFTER APPLYING SOD.

EROSION CONTROL PLAN

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

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 PRO-TECTED WITH TEMPORARY OR PERMANENT COVER, SUCH AS SOD, SEED AND MULCH, CROWVETCH, LESPEDEZA OR CREEPER. NEWLY GRADED CHANNELS OR STEEP SLOPES WILL REQUIRE THE USE OF FIBROUS MATTING, NETTING OF SEEDED AND MULCHED AREAS, OR THE STAKING OR SHINGLING OF SOD WHILE VEGETATION IS BECOMING ESTABLISED.

B. RUN-OFF CONTROL

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

C. SEDIMENT TRAPPING

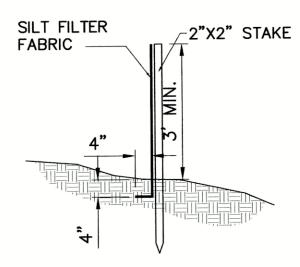
- THE TRAPPING OF ERODED PARTICLES WILL BE ACCOMPLISHED BY THE DIVERSION OF RUN-OFF TO SEDIMENT BASINS, EXCAVATION TRAPS, BERMS, STAKED HAY BALES, OR FLOATING SILT CURTAINS.
- THE PROPOSED RETENTION AND/OR DETENTION POND(S) ALONG WITH ANY ENVIRONMENTAL BERM(S)/REAR YARD SWALE(S) SHALL BE CONSTRUCTED FIRST. THE POND(S) AND OUTFALL STRUCT-URE(S) MUST BE COMPLETE AND OPÈRATIONAL 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 VEGETA-TIVE COVER HAS ESTABLISHED SUFFICIENTLY TO STABILIZE THE SOILS AND PREVENT EROSION.

D. SOIL MOISTURE

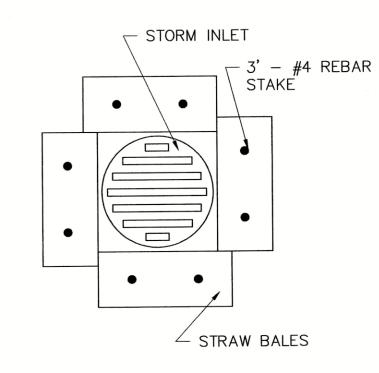
THE CONTRACTOR SHALL HAVE AVAILABLE ON THE CONSTRUCTION SITE A WATER SOURCE CAPABLE OF APPLYING WATER TO DRY EXPOSED SOIL IN ORDER TO PREVENT WIND EROSION. THE APPLICATION RATE AND MANNER SHALL BE SUCH THAT SOIL MOISTURE IS ATTAINED AND NO SURFACE RUN-OFF IS CREATED.

E. RESPONSIBILITY

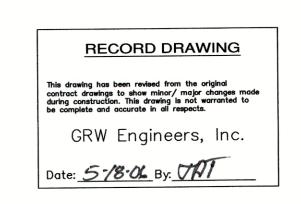
THE CONTRACTOR SHALL BE HELD RESPONSIBLE UNTIL THE CERTIFICATE OF COMPLETION IS ISSUED. AFTER THAT, THE OWNER WILL BE RESPONSIBLE FOR MAINTENANCE OF THE STORMWATER COLLECTION AND DETENTION SYSTEM.



SILT FENCE DETAIL



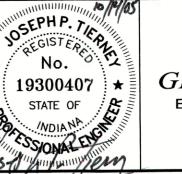
INLET PROTECTION N.T.S



FALL CREEK REGIONAL WASTE DISTRICT PENDLETON, INDIANA INGALLS FORCE MAIN REPLACEMENT

EROSION CONTROL DETAIL SHEET

GRW PROJECT NO. 3290-12





OCTOBER 2005 FILE NAME: NOT TO SCALE SHEET NO. CHECKED: JPT C-07 APPROVED: