

Developing Drawings of Sufficient Detail (DOSD)

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INDOT

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What is a DOSD

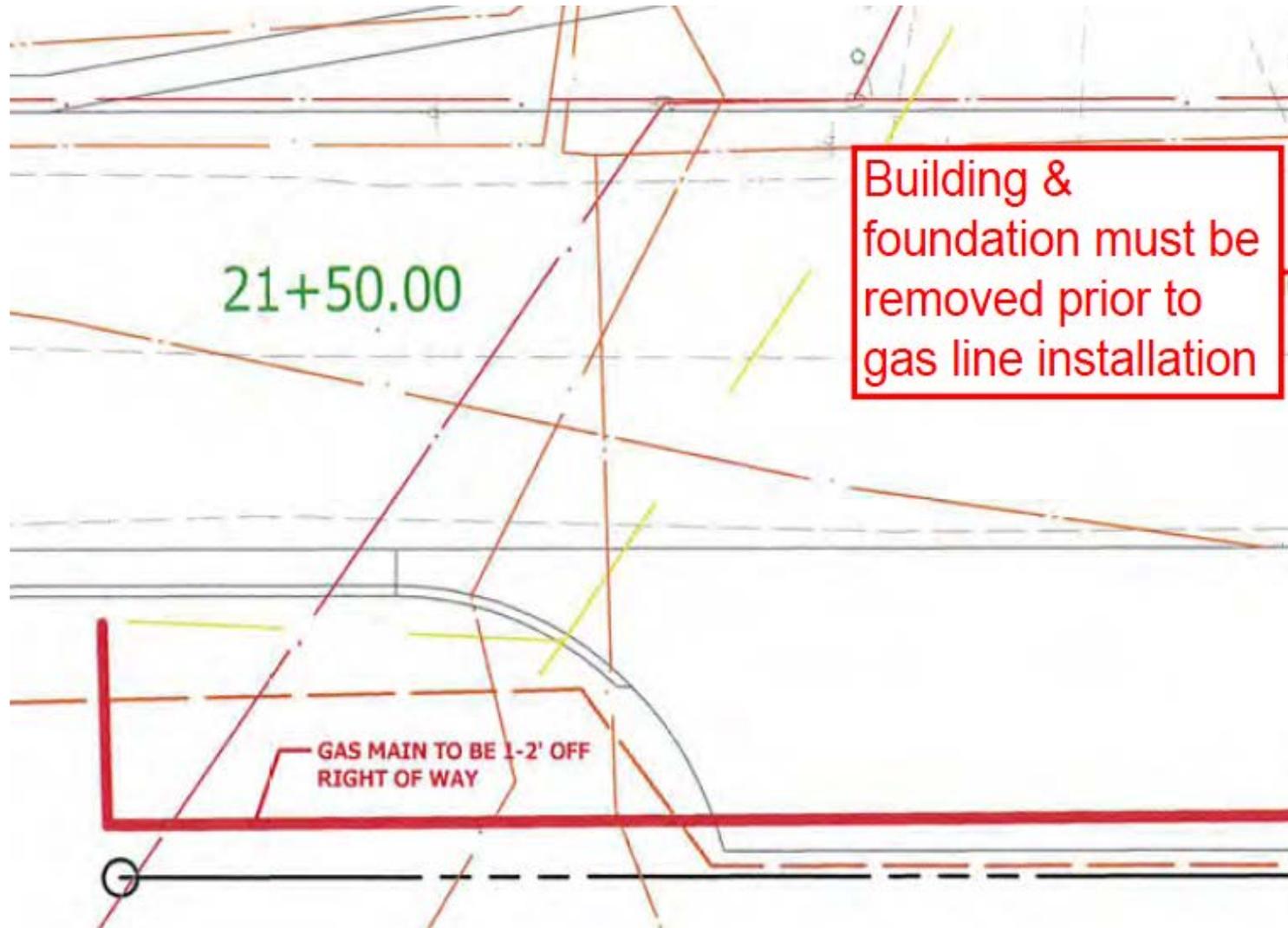
105 IAC 13-3-3(c)6 states that the Work Plan shall include the following...

“A drawing of sufficient detail and scale to show the proposed location of the facility relocation.”

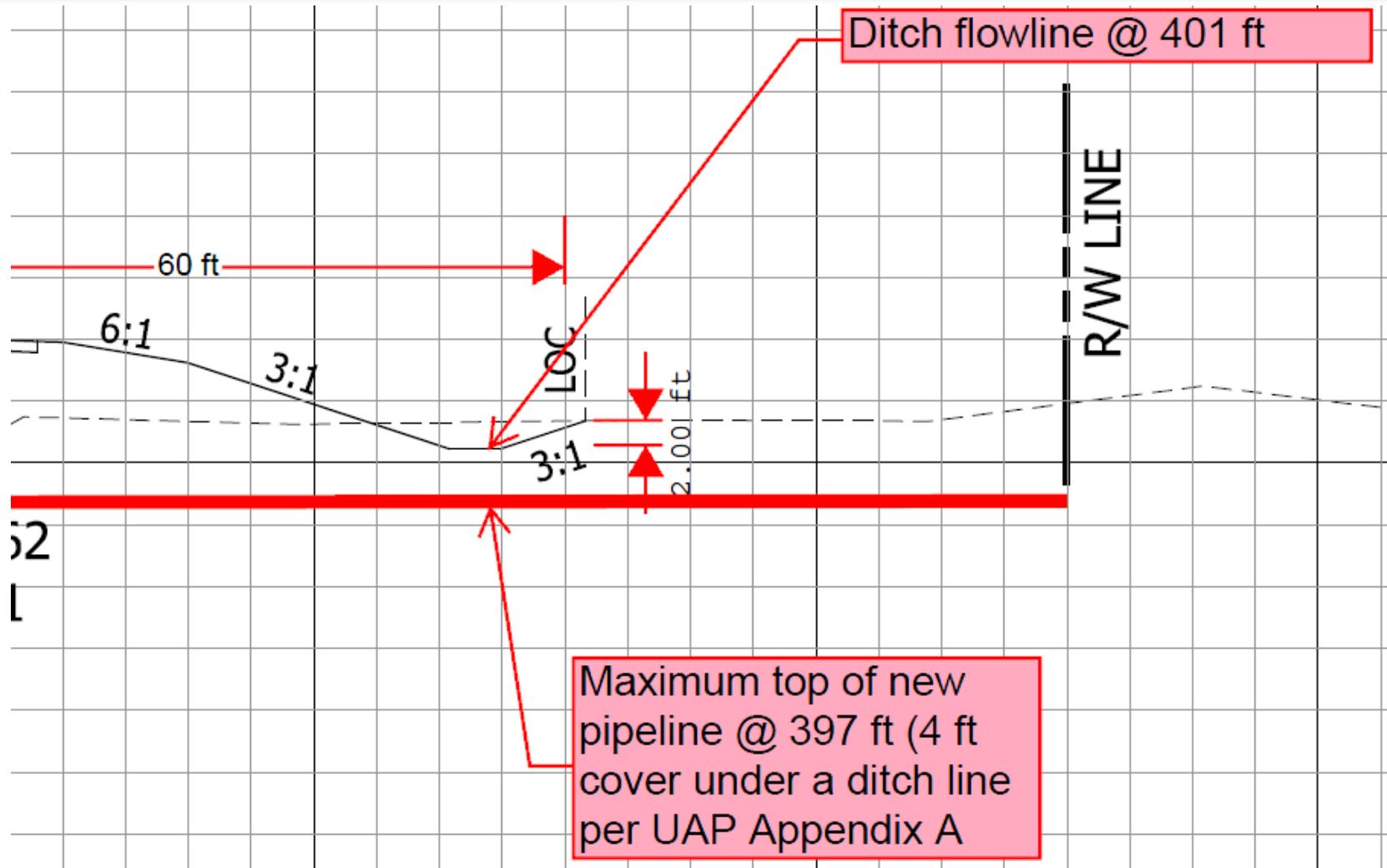
Thus...Detailed, Scaled & shows Relocation



Example 2 (more helpful)



Example 3 (continued)



Purpose of DOSD?

To enable the Utility Coordinator and design staff to determine if the proposed facility relocation will resolve all known facility conflicts with the proposed design without causing additional conflicts with other utilities' facilities or with the project.

Establish – Everyone knows where everyone goes in engineering/ construction terms! X,Y, Z and time



Components of DOSD?

#1 - Must use the INDOT Plans

“INDOT Plans” refers to the use of the design alignment, stations profile, construction limits, right-of-way.



Component #2

- How can they be submitted?
 - May mark-up the PDF provided by the Designer
 - May mark-up a hard-copy provided by the Designer
 - May provide a CAD file that uses the Base files as provided by the Designer
 - May provide a PDF of plans on their title block

Must be drawn to scale with corresponding annotations – Station, Offset, Elevation!



Component #3

- Uses the project alignment for Stations and Offsets, noting:
 - Poles, anchors, and guy wires
 - Fire hydrants, valves, THRUST BLOCKS!
 - Crossing Station only unless termini are in the right-of-way.
 - Vaults, hand holes, manholes – more than symbols on the plans – drawn to scale X,Y,Z
 - Bore Pits – real construction dimensions
 - Control cabinets, pedestals



Component #4

- Provides Elevations
 - For all underground facilities
 - Maximum elevation at top of facility when under pavement, structure, or ditch
 - Minimum elevation at bottom of facility between facilities or proposed project construction
 - Not ? -feet below grade...which grade?



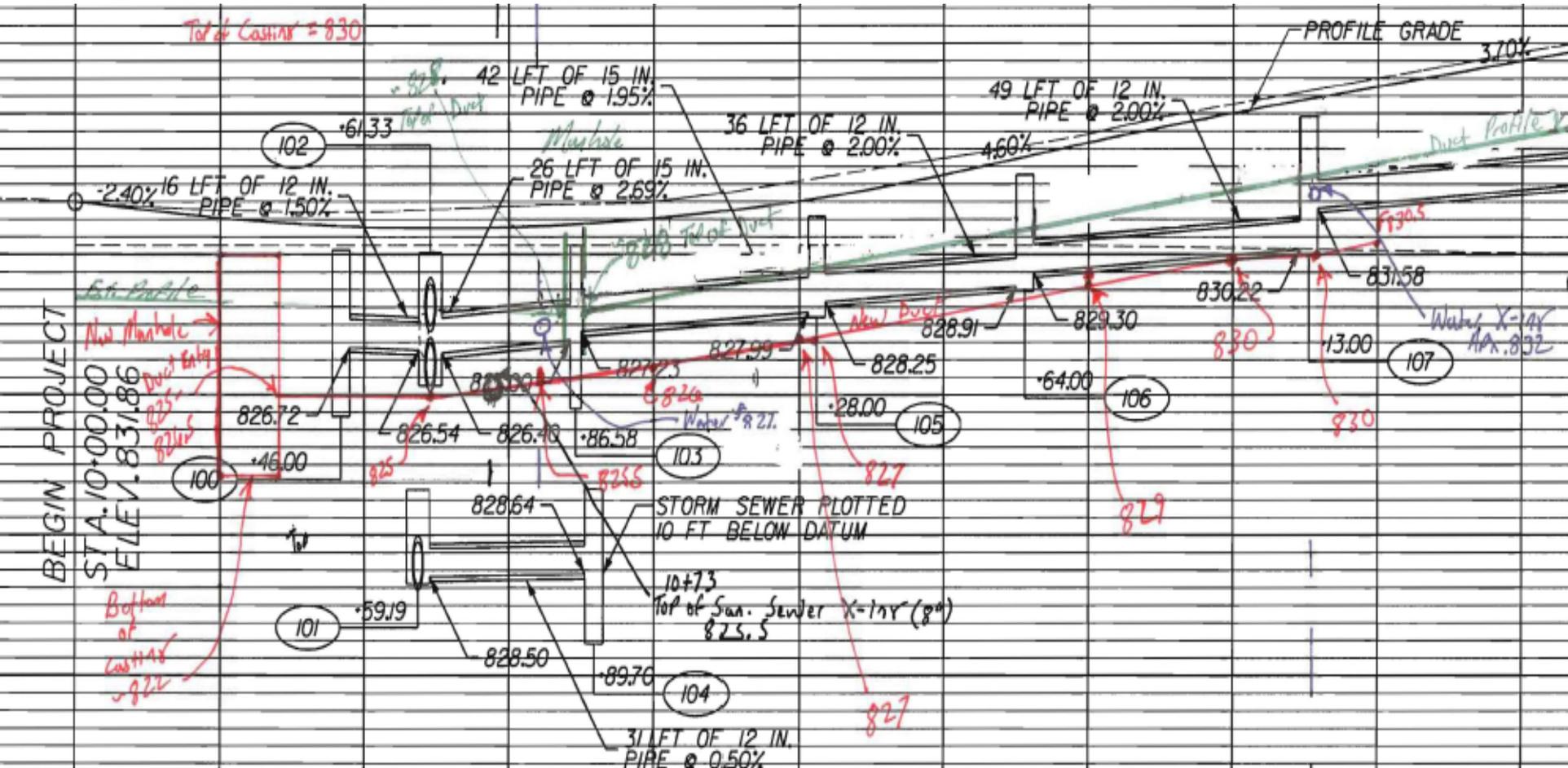
Component #5

- Provides cross-sections showing facilities, distinguishing between:
 - Aerial or underground
 - Proposed facilities
 - Existing facilities
 - Retired facilities
 - Existing facilities to remain
 - Existing facilities to be removed



Drawing of Sufficient Detail – #5

- Provides cross sections showing facilities



Component #6

- Method of installation
 - Direct Bury – estimated construction room
 - Bore
 - Pits – approximate size (W x L x D) and locations
- Type and size of pipe to be installed
- Any critical clearances needed
- Note any areas of concern or special need
 - Ex. – holding a pole, holding/protecting a conduit bank, etc.



Drawing of Sufficient Detail – #6

- Method of installation

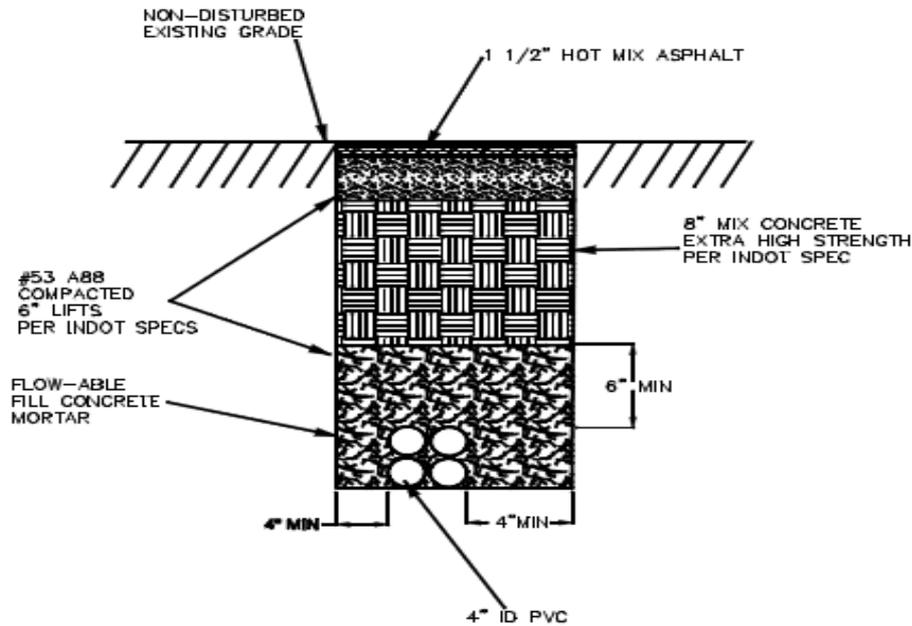


FIGURE #2
TYPICAL SECTION IN NON-RECONSTRUCTED
ROADWAY/ALLEYWAY AREA

	frontier Communications
INDOT 1173719 INDIANA ST RD MOV GREENCASTLE, IN	
PROJECT NUMBER: 2333639	S.O. AREA: GREENCASTLE EXCH. CODE: GMCB (10945)
DRAWN DATE: 4/17/2013	ENGR: MARY MACK PHONE: 765-423-3468
SCALE: 1"=8'	TAX DISTRICT: FILE: DWD 8 OF 11
TWNSHIP: 14N	RNG: R4 SEC: 21

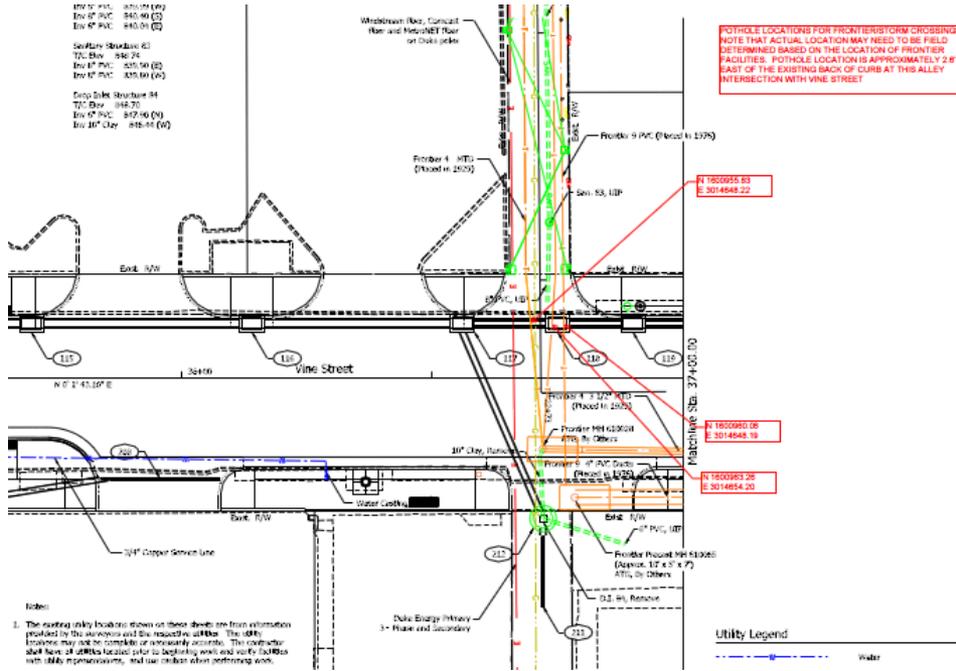


Importance of DOSD?

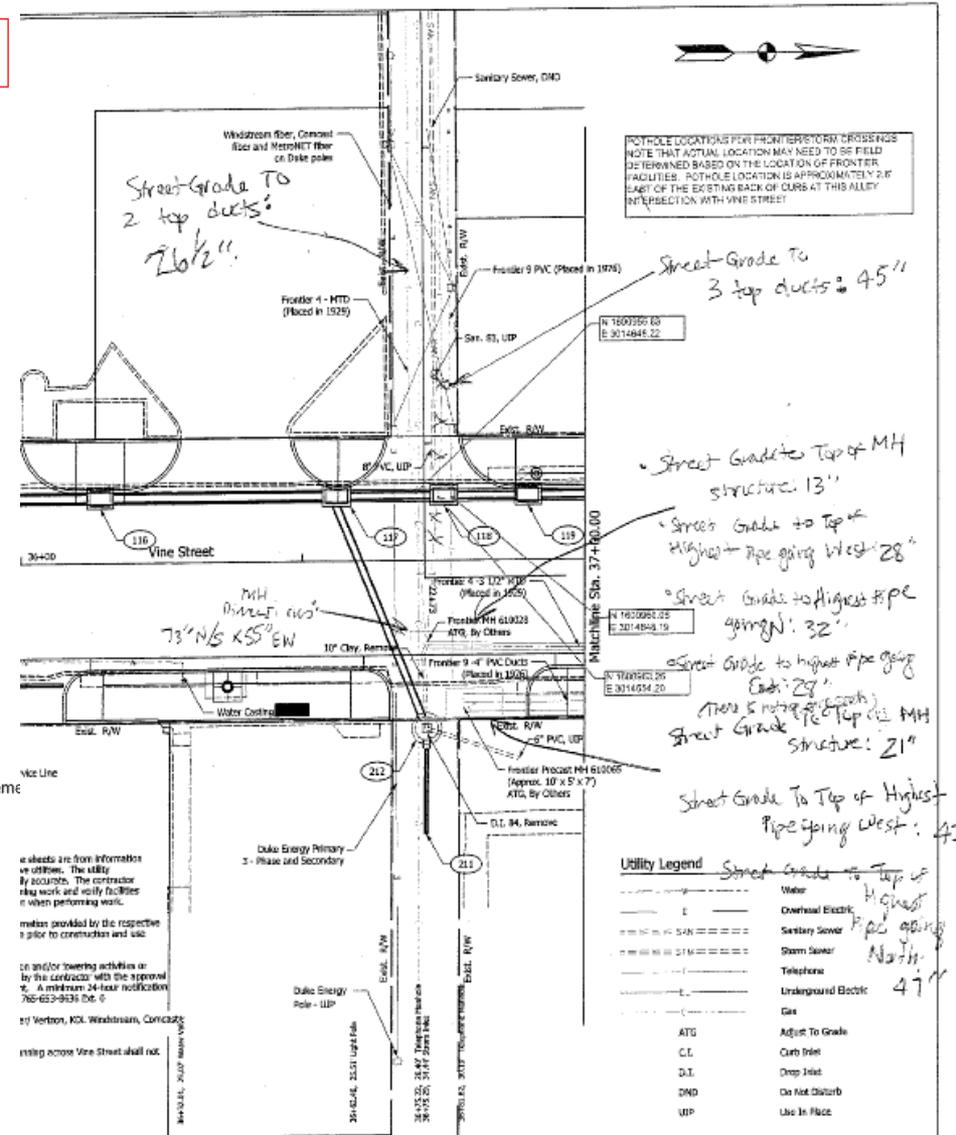
- Must know WHERE the facility will be as it relates to the proposed design
- Must know if required clearances are met
- Must know environmental commitments have not been compromised
- Must know potential constructability issues
- Must know facilities are within proposed ROW
- Must know if conflicts with other relocations



Plan Interaction Process



POT HOLE LOCATIONS FOR FRONTIER FORM CROSSINGS
NOTE THAT ACTUAL LOCATION MAY NEED TO BE FIELD DETERMINED BASED ON THE LOCATION OF FRONTIER FACILITIES. POT HOLE LOCATION IS APPROXIMATELY 2' EAST OF THE EXISTING BACK OF CURB AT THIS ALLEY INTERSECTION WITH VINE STREET



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Street-Grade To 3 top ducts = 45"

Street-Grade To Top of MH structure: 13"

Street-Grade to Top of Highest Pipe going West: 28"

Street-Grade to Highest Pipe going N: 32"

Street-Grade to highest Pipe going East: 29"

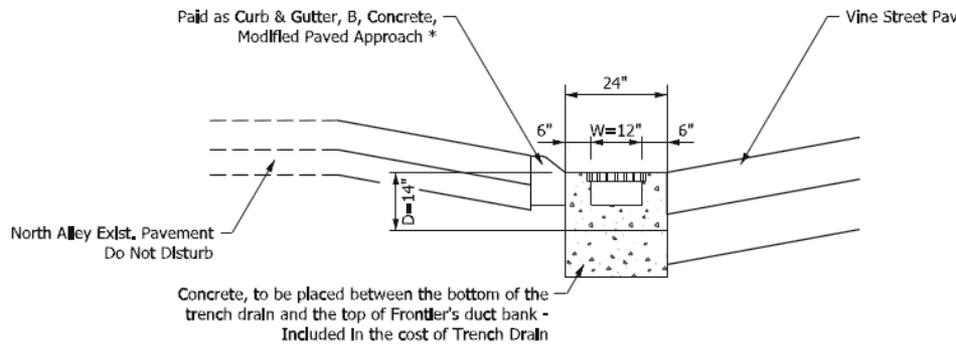
Street-Grade to Top of MH structure: 21"

Street-Grade to Top of Highest Pipe going West: 47"

Utility Legend

Street-Grade to Top of Highest Pipe going North: 47"	Water
	Overhead Electric
	Sanitary Sewer
	Storm Sewer
	Telephone
	Underground Electric
	Gas
	ATG
	C.I.
	D.I.
	DND
	UP

These sheets are from information as utilities. The utility by accounts. The contractor may work and verify facilities when performing work.
Notes provided by the respective utilities prior to construction and use.
On and/or lowering activities or by the contractor with the approval of. A minimum 24-hour notification 765-622-8838 Ext. 0.
© 2017 Verticon, KOL Windows, Concrete
install across Vine Street shall not.



Trench Drain Detail - Str. 118
N.T.S.

RECOMMENDED FOR APPROVAL	DESIGN ENGINEER	DATE	CITY OF GREENCASTLE	HORIZONTAL SCALE	VERTICAL SCALE	PROJECT
DESIGNED BY	DRAWN BY	DATE	UTILITY PLANS	1" = 10'	1" = 4'	117228
CHECKED BY	DATE					42
						117228

What if Utility **Can't** do DOSD?

- Some utilities don't have the personnel, expertise or experience to produce a DOSD
 - Meet live if possible
 - Do it with them
 - Recommend hiring a consultant
 - If we must, do it for them
 - Include in the Risk Report to the PM
 - Escalate to the Authorized Rep and/or OSA



What if Utility **Won't** do DOSD?

- Some utilities refuse to provide a Drawing of Sufficient Detail
 - Identify why they will not provide a DOSD
 - Escalate to the next level at the utility,
 - Escalate to INDOT OSA who will escalate to Director if necessary
 - Document EVERYTHING
 - Include in the Risk Report to the PM



What if Utility **Won't** do DOSD?

- Try to gain concurrence from the utility representative when providing the station, offset, and elevation
- Contact a supervisor at the utility if cooperation is still not achieved
- Document EVERYTHING



A Few Notes...

- The rule does NOT make it clear what a “Drawing of Sufficient Detail” is.
- Utilities may have a different perspective or definition of DOSD.
- Utilities have not received training on what is expected on DOSD.
- Work with the utilities to achieve a DOSD.



Benefit to Utility Coordinator?

Changes in DRAWINGS of SUFFICIENT DETAIL:

- “Everyone knows, where everyone goes!”
- “No Surprises” during INDOT construction
- Assurance any required relocations only occur once
- You, each utility company, and the Designer are all speaking the same language



Any Questions?

Thank You

