

STATE OF SOUTH DAKOTA	PROJECT	SHEET NO.	TOTAL SHEETS
	411C414	1	12

STATE OF SOUTH DAKOTA
DEPARTMENT OF TRANSPORTATION

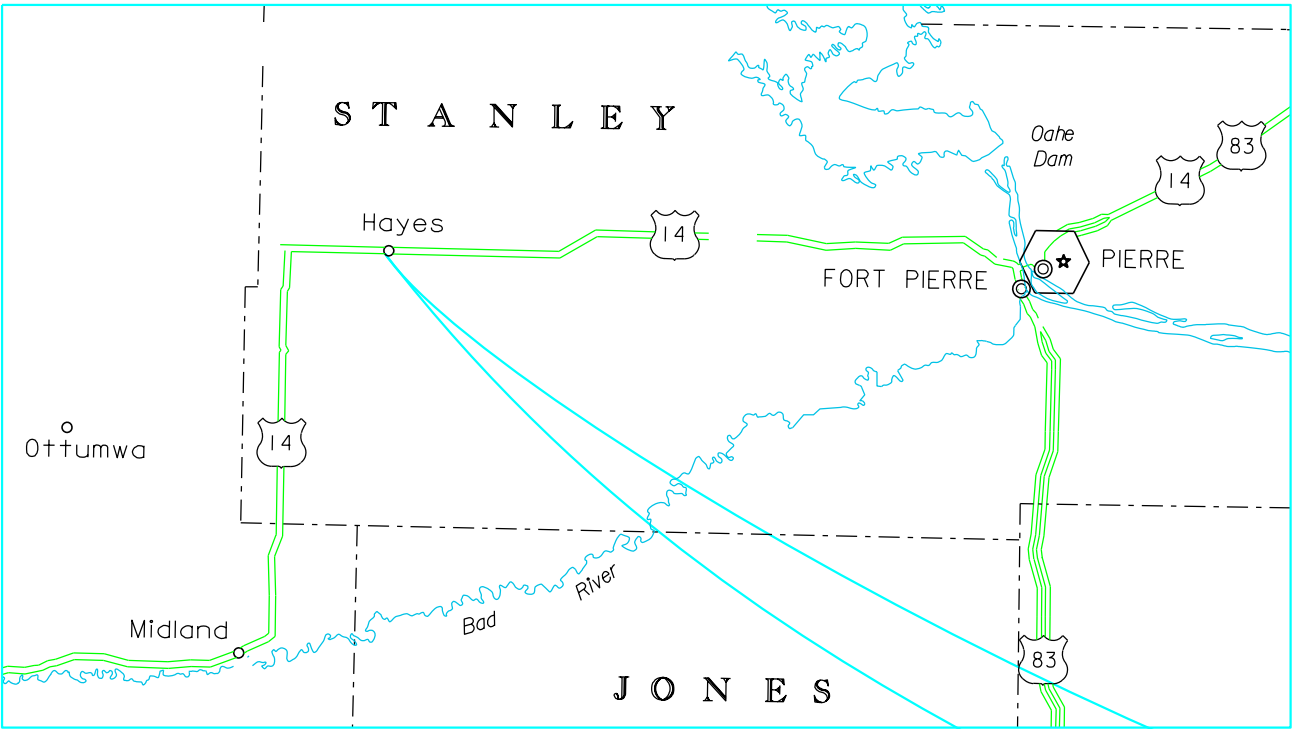
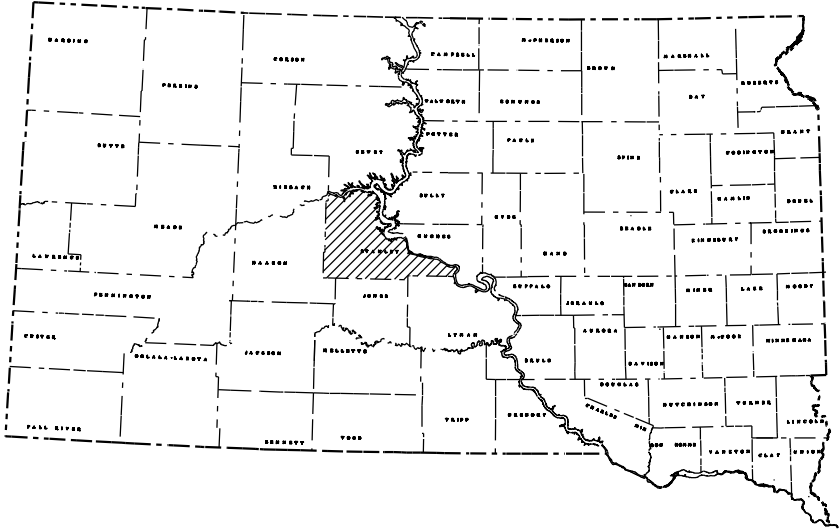
PLANS FOR PROPOSED

PROJECT 411C414
DOT's HAYES SHOP
STANLEY COUNTY
RECLAIM ASPHALT, GRADE TO BLUE TOPS,
CONCRETE VALLEY GUTTER/APRONS,
AND ASPHALT CONCRETE SURFACING

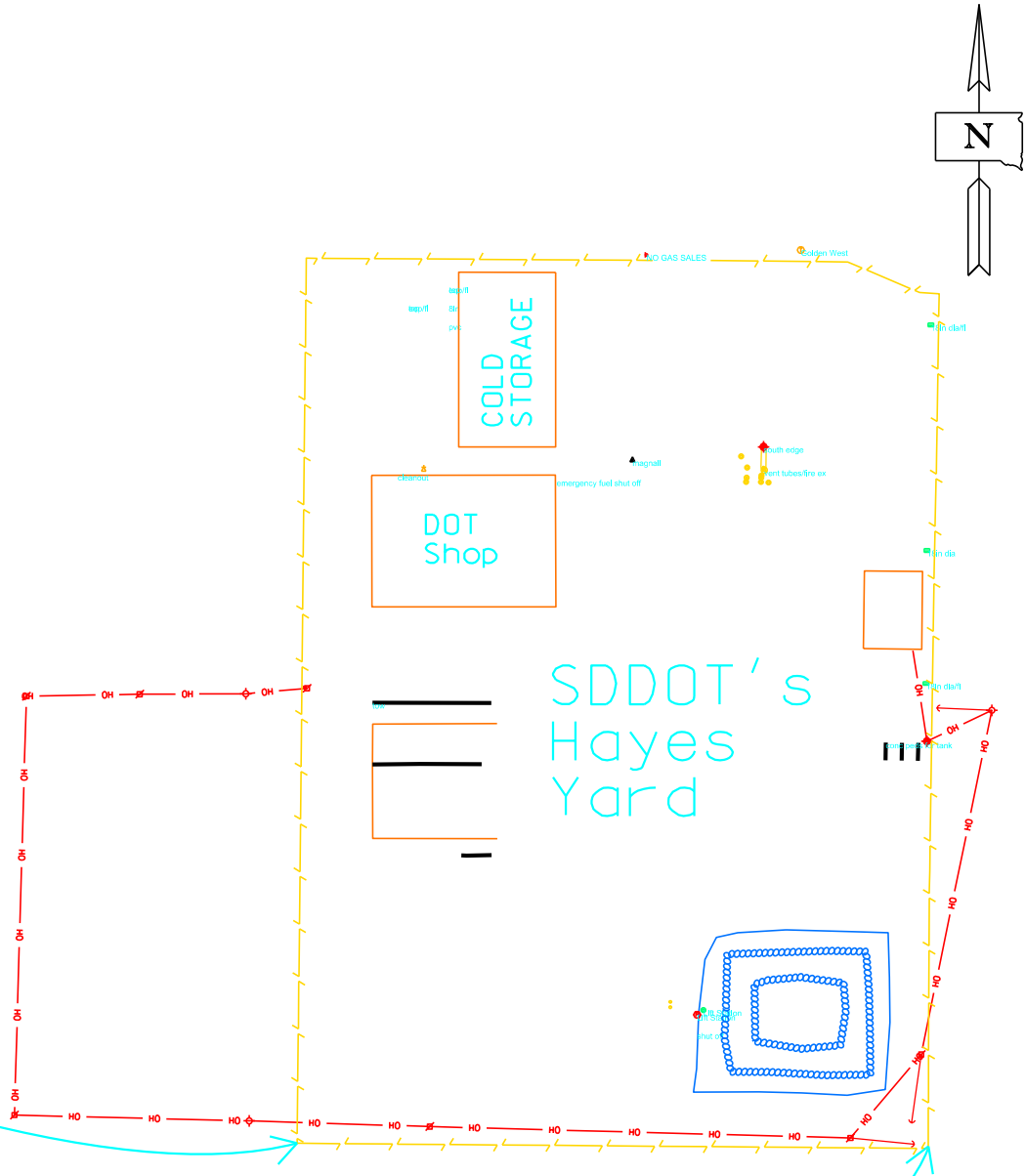
PCN: I4A4

INDEX OF SHEETS

- 1: TITLE SHEET
2-4: ESTIMATE OF QUANTITIES AND
PLAN NOTES
5: CONCRETE VALLEY GUTTER/APRONS
6: ASPHALT CURB REPLACEMENT
DETAIL
7: RECLAIM ASPHALT LIMITS
8: UTILITIES
9: ASPHALT PLACEMENT LIMITS
10: ELEVATIONS FOR THE TOP OF THE
NEW ASPHALT
11: TOP OF NEW ASPHALT'S
CONTOUR LINES
12: STANDARD PLATES



STORM WATER PERMIT
None Required



ESTIMATE OF QUANTITIES

BID ITEM NUMBER	ITEM	QUANTITY	UNIT
009E0010	Mobilization	Lump Sum	LS
009E3200	Construction Staking	Lump Sum	LS
110E7700	Remove Drop Inlet Frame and Grate Assembly for Reset	1	Each
250E0010	Incidental Work	Lump Sum	LS
280E0010	Full Depth Reclamation	5,160	SqYd
320E1200	Asphalt Concrete Composite	1,464.0	Ton
451E7005	Adjust Sewer Service	3	Each
650E6080	8" Concrete Valley Gutter	116	Ft
670E7000	Reset Drop Inlet Frame and Grate Assembly	1	Each

SPECIFICATIONS

Construction Specifications: South Dakota Standard Specifications for Roads and Bridges, 2015 Edition and Required Provisions, Supplemental Specifications and Special Provisions as included in the Proposal.

SCOPE OF WORK

The work to be done in the Hayes DOT Maintenance Yard includes but is not limited to the following:

1. Reclaim Asphalt pavement to the limits shown on the plans.
2. Some excavation and grading of the subgrade may be needed in some areas after the surfacing is reclaimed.
3. Remove and Reset drop inlet frame and grate.
4. Grade reclaimed asphalt/base course to blue top elevations.
5. Construct concrete valley gutter /aprons.
6. Place asphalt on the newly graded reclaimed asphalt/base course.
7. Adjust sewer services.

SEQUENCE OF OPERATIONS

The Contractor shall notify the DOT Highway Maintenance Supervisor and Lead Worker to coordinate construction activities.

- Jared Fosheim Supervisor 605-280-4680
- Larry Anderson Lead Worker 605-280-4916

Once construction begins, progress shall be continuous until completion. Access to the fuel pumps and buildings shall be maintained throughout the project.

UTILITIES

The Contractor shall be aware that the existing utilities shown in the plans were surveyed prior to the design of this project and might have been relocated or replaced by a new utility facility prior to construction of this project or might not require adjustment and may remain in its current location. The Contractor shall contact the involved utility companies through South Dakota One Call (1-800-781-7474) prior to starting work. It shall be the responsibility of the Contractor to coordinate work with the utility owners to avoid damage to existing facilities.

COMMITMENT H: WASTE DISPOSAL SITE

The Contractor shall furnish a site(s) for the disposal of construction and/or demolition debris generated by this project.

Action Taken/Required:

Construction and/or demolition debris may not be disposed of within the Public ROW.

The waste disposal site(s) shall be managed and reclaimed in accordance with the following from the General Permit for Construction/Demolition Debris Disposal Under the South Dakota Waste Management Program issued by the Department of Environment and Natural Resources.

The waste disposal site(s) shall not be located in a wetland, within 200 feet of surface water, or in an area that adversely affects wildlife, recreation, aesthetic value of an area, or any threatened or endangered species, as approved by the Project Engineer.

If the waste disposal site(s) is located such that it is within view of any ROW, the following additional requirements shall apply:

1. Construction and/or demolition debris consisting of concrete, asphalt concrete, or other similar materials shall be buried in a trench completely separate from wood debris. The final cover over the construction and/or demolition debris shall consist of a minimum of 1 foot of soil capable of supporting vegetation. Waste disposal sites provided outside of the Public ROW shall be seeded in accordance with Natural Resources Conservation Service recommendations. The seeding recommendations may be obtained through the appropriate County NRCS Office. The Contractor shall control the access to waste disposal sites not within the Public ROW through the use of fences, gates, and placement of a sign or signs at the entrance to the site stating “No Dumping Allowed”.
2. Concrete and asphalt concrete debris may be stockpiled within view of the ROW for a period of time not to exceed the duration of the project. Prior to project completion, the waste shall be removed from view of the ROW or buried and the waste disposal site reclaimed as noted above.

The above requirements will not apply to waste disposal sites that are covered by an individual solid waste permit as specified in SDCL 34A-6-58, SDCL 34A-6-1.13, and ARSD 74:27:10:06.

Failure to comply with the requirements stated above may result in civil penalties in accordance with South Dakota Solid Waste Law, SDCL 34A-6-1.31.

All costs associated with furnishing waste disposal site(s), disposing of waste, maintaining control of access (fence, gates, and signs), and reclamation of the waste disposal site(s) shall be incidental to the various contract items.

COMMITMENT I: HISTORICAL PRESERVATION OFFICE CLEARANCES

The SDDOT has obtained concurrence with the State Historical Preservation Office (SHPO or THPO) for all work included within the project limits and all department designated sources and designated option material sources, stockpile sites, storage areas, and waste sites provided within the plans.

Action Taken/Required:

All earth disturbing activities not designated within the plans require review of cultural resources impacts. This work includes, but is not limited to: Contractor furnished material sources, material processing sites, stockpile sites, storage areas, plant sites, and waste areas.

The Contractor shall arrange and pay for a cultural resource survey and/or records search. The Contractor has the option to contact the state

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	411C414	2	12

Archaeological Research Center (ARC) at 605-394-1936 or another qualified archaeologist, to obtain either a records search or a cultural resources survey. A record search might be sufficient for review; however, a cultural resources survey may need to be conducted by a qualified archaeologist.

The Contractor shall provide ARC with the following: a topographical map or aerial view on which the site is clearly outlined, site dimensions, project number, and PCN. If applicable, provide evidence that the site has been previously disturbed by farming, mining, or construction activities with a landowner statement that artifacts have not been found on the site.

The Contractor shall submit the records search or cultural resources survey report and if the location of the site is within the current geographical or historic boundaries of any South Dakota reservation to SDDOT Environmental Engineer, 700 East Broadway Avenue, Pierre, SD 57501-2586 (605-773-3180). SDDOT will submit the information to the appropriate SHPO/THPO. Allow **30 Days** from the date this information is submitted to the Environmental Engineer for SHPO/THPO review.

If evidence for cultural resources is uncovered during project construction activities, then such activities shall cease and the Project Engineer shall be immediately notified. The Project Engineer will contact the SDDOT Environmental Engineer in order to determine an appropriate course of action.

SHPO/THPO review does not relieve the Contractor of the responsibility for obtaining any additional permits and clearances for Contractor furnished material sources, material processing sites, stockpile sites, storage areas, plant sites, and waste areas that affect wetlands, threatened and endangered species, or waterways. The Contractor shall provide the required permits and clearances to the Project Engineer at the preconstruction meeting.

RECLAMATION OF EXISTING CONCRETE AND ASPHALT PAVEMENT

Existing asphalt concrete shall be reclaimed to the limits shown on the “Reclaim Asphalt” plan sheet. Any additional reclamation of asphalt shall be at the discretion of the Engineer.

NOTE: Along the east side of the yard a small windrow of asphalt acts as a curb which prevents storm water from running onto the adjacent property to the east, but instead retains the storm water and directs it to the drop inlets. This asphalt like curb shall be reclaimed or removed and disposed of.

For Information Only: The existing asphalt depth varies across the yard from depths as little as 2” to as much as 6” and possibly more. The “Reclaim Asphalt” sheet shows approximate core hole locations along with the asphalt and base thicknesses.

Payment for the reclaiming of the asphalt concrete, including the curb, shall be paid for based on the contract unit price per Square Yard for “Full Depth Reclamation”.

PAVEMENT STRUCTURES

The pavement structures to be placed are as follows:

- All concrete placed shall be 8” of concrete with 5” of reclaimed asphalt/base course below.
- All asphalt pavement shall be 4” of AC with 9” of reclaimed asphalt/base course below.
- If additional base is needed, SDDOT forces will provide salvaged base course as needed. The contractor shall allow 5 business days for delivery.

EXCAVATION

All excavation needed to accommodate the reclaimed asphalt/base course beneath the 4” asphalt pavement or the 8” Valley Gutter/Aprons shall be incidental to the respective bid items. Care shall be taken so as NOT to cause too much disturbance below the bottom of the base course. When the excavation is complete, the surface shall be compacted as approved by the Engineer prior to the placement of reclaimed asphalt/base course.

SALVAGED ASPHALT BASE COURSE

For Information Only: When comparing the finished asphalt design surface to the existing surface, it appears that an excess of approximately 300 Cu. Yds. of reclaimed asphalt/base course will exist. However, if for some reason it is found that additional granular material is needed on the job, the Department will provide and stockpile additional salvaged asphalt base course on site for use by the contractor. It shall be the contractor’s responsibility to excavate to the desired elevation and then place and compact the reclaimed asphalt/base course such that the pavement structures are constructed as per the **PAVEMENT STRUCTURES** note.

ASPHALT PAVEMENT AND ASPHALT CURB REPLACEMENT

Asphalt Concrete Composite shall be used to construct 1) the 4” Asphalt Pavement in the yard, 2) the 2” Approach Asphalt Overlay on the entrance to the yard, and 3) the Asphalt Curb Replacement along the east edge of the yard. The Asphalt Concrete Composite unit price shall include Asphalt Concrete, placement, curb replacement, excavation, compaction of salvaged asphalt base course, hot pour sealant along all concrete/asphalt interfaces, labor, equipment, and any other items needed to construct the Asphalt Pavement. The 4” Asphalt Concrete Pavement, Asphalt Overlay, and Asphalt Curb shall be paid for at the contract unit price per Ton for “Asphalt Concrete Composite”.

8” CONCRETE VALLEY GUTTER/APRONS

The 8” Valley Gutter/Aprons shall be constructed using M6 Concrete. The 8” Concrete Valley Gutter unit price shall include M6 concrete, excavation, reclaimed asphalt/base course, all reinforcing steel, joint sawing, labor, equipment, dowels, expansion joint filler, and any other items needed to construct the valley gutter/aprons as shown on the plan sheet. The valley gutter/apron work shall be paid for at the contract unit price per Foot for “8” Concrete Valley Gutter”.

For information only: It is estimated that 514 pounds of steel will be needed for the construction of the valley gutter /aprons.

DROP INLET FRAME AND GRATE ASSEMBLIES

Three drop inlet frame and grate assemblies exist along the east side of the DOT yard. One of these assemblies will be removed and reset as described below. However, the other two assemblies shall remain in place. Therefore, care shall be taken so as not to damage these two drop inlet frame and grate assemblies during the asphalt reclamation process, grading, or during the placement of asphalt. Any damage to the surrounding concrete or the frame and grate assemblies shall be fixed at the contractor’s expense.

RESET DROP INLET FRAME AND GRATE ASSEMBLY

The drop inlet on the SE corner of the old salt shed shall be removed and reset to the elevation shown on the “UTILITIES” plan sheet. Care shall be taken so as not to break or damage the existing inlet’s frame and grate. A 3’ x 3’ x 8” deep square shall be formed and centered around the frame and grate.

M6 Concrete shall be placed in the forms and around the inlet's frame. In addition, two hoops of #4 reinforcing steel shall be placed in the formed area such that the first hoop has 2” of clear cover on all sides and the 2nd hoop is 6” in from all sides. Both hoops shall be centered in the concrete’s depth.

The work performed to reset the drop inlet shall be paid for at the contract unit price for “Reset Drop Inlet Frame and Grate Assembly”. Payment for this item shall include, but will not be limited to, all labor, tools, equipment, excavation, compaction, forming, reinforcing steel, concrete, disposal of debris, etc.

ADJUST SEWER SERVICE

As shown on the “UTILITIES” plan sheet, a Shop Floor Sewer Drain with Cleanouts exists and extends from the south edge of the New Shop’s concrete drive to the lift station in the southeast corner of the DOT yard. The Sewer Cleanouts shall be located and exposed such that they are not damaged during:

- 1) the reclaiming of the asphalt surface,
- 2) the blue topping and grading of the reclaimed asphalt base/course, and,
- 3) the asphalt paving of the DOT yard.

After the asphalt work has been completed, the sewer cleanouts shall be adjusted to match the elevation of the new asphalt surface. The sewer cleanouts shall be adjusted as follows:

- 1) The 2 sewer cleanouts located beneath the new asphalt shall be exposed by sawing and removing a 2’ x 2’ square piece of asphalt centered over the cleanout. These cleanouts shall be adjusted to match the elevation of the surrounding asphalt. The depth of the hole shall be graded to a depth of 8” from the top of the asphalt. A single hoop of #4 reinforcing steel shall be placed in the hole such that it has 2” of clear cover on all sides and centered in the depth of the 8” concrete. Class M6 concrete shall be used to fill the holes.
- 2) The single sewer cleanout located just south of the new asphalt shall be adjusted to an elevation such that it will match a desirable elevation for the salvaged asphalt base course. A 3’ x 3’ square area shall be formed and centered over the cleanout. The depth of the hole shall be graded to a depth of 8” below selected elevation. Two hoops of #4 reinforcing steel shall be placed in the hole such that the first has 2” of clear cover on all sides and the 2nd is 6” in from all sides. Both hoops shall be centered in the concrete’s depth. Class M6 concrete shall be used to fill the hole.

The work performed to adjust the sewer cleanouts shall be paid for at the contract unit price for “Adjust Sewer Service”. Payment for this item shall include, but will not be limited to, all labor, tools, equipment, sawing, excavation, reinforcing steel, concrete and any ancillary items needed to complete the work.

M6 CONCRETE

All M6 Concrete shall use ledge rock for the course aggregate and the fine aggregate shall conform to the ASR requirements set forth in Section 800.2.D.

The chances for ASR shall be minimized through the use of one of the following measures:

- Class F Modified Fly Ash shall be substituted for 20 percent of the cement in accordance with Section 605 of the Standard Specifications.
- The addition of ASR reducing admixtures (such as lithium) could be used.

The fine aggregate may require screening as determined by the Engineer.

All concrete surfaces shall receive a broomed finish.

All of the other requirements as set forth in Section 462 for M6 shall apply.

ALKALI SILICA REACTIVITY

Fine aggregate shall conform to Section 800.2.D Alkali Silica Reactivity (ASR) Requirements.

Fine aggregate with a 14 day expansion value of 0.250 and greater shall not be used.

Below is a list of known fine aggregate sources and the average corresponding 14 day expansion values:

Source	Location	Expansion Value
Bachman	Winner, SD	0.335*
Birdsall S&G	Creston, SD	0.158
Birdsall S&G	Oral, SD	0.131
Birdsall S&G	Wasta, SD	0.170
Bitterman	Delmont, SD	0.316*
Concrete Materials	Corson, SD	0.170
Croell	Quinn, SD	0.089
Emme Sand & Gravel	Oneil, NE	0.217
Fisher S&G	Rapid City, SD	0.092
Fisher S&G	Spearfish, SD	0.053
Fisher S&G	Wasta, SD	0.159
Fuchs	Pickstown, SD	0.275*
Higman	Akron, IA	0.198
Higman	Hudson, SD	0.187
Hilde	Madison, SD	0.116
Jensen	Herried, SD	0.276*
L.G. Everist	Brookings, SD	0.186
L.G. Everist	Hawarden, IA	0.166
L.G. Everist	Summit, SD	0.141
Morris	Blunt, SD	0.192
Morris – Richards Pit	Onida, SD	0.188
Myrl & Roys Paving- Nelson Pit	Sioux Falls, SD	0.156
Northern Concrete Agg.	Rauville, SD	0.113
Northern Concrete Agg.	Luverne, MN	0.124
Opperman - Gunvordahl Pit	Burke, SD	0.337*
Opperman - Cahoy Pit	Herrick, SD	0.307*
Opperman - Jones Pit	Burke, SD	0.321*
Opperman – Randall Pit	Pickstown, SD	0.239
Thorpe Pit	Britton, SD	0.098
Wagner Building Supplies	Pickstown (Wagner), SD	0.241
Winter Brothers- Whitehead Pit	Brookings, SD	0.197

CHAIN LINK FENCE

Care shall be taken so as not to damage the chain link fence during the asphalt reclamation process, grading, or during the placement of asphalt. Any damage to the chain link fence shall be fixed at the contractor’s expense.

INCIDENTAL WORK

Remove the concrete oil tank pedestals to a point at least 2’ below the top of the new asphalt or in their entirety. These pedestals are located in the SE corner of the yard. The concrete debris shall be removed and disposed of or become the property of the contractor. The holes that remain from their removal shall be backfilled to the satisfaction of the Engineer.

INCIDENTAL WORK (Continued)

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	411C414	4	12

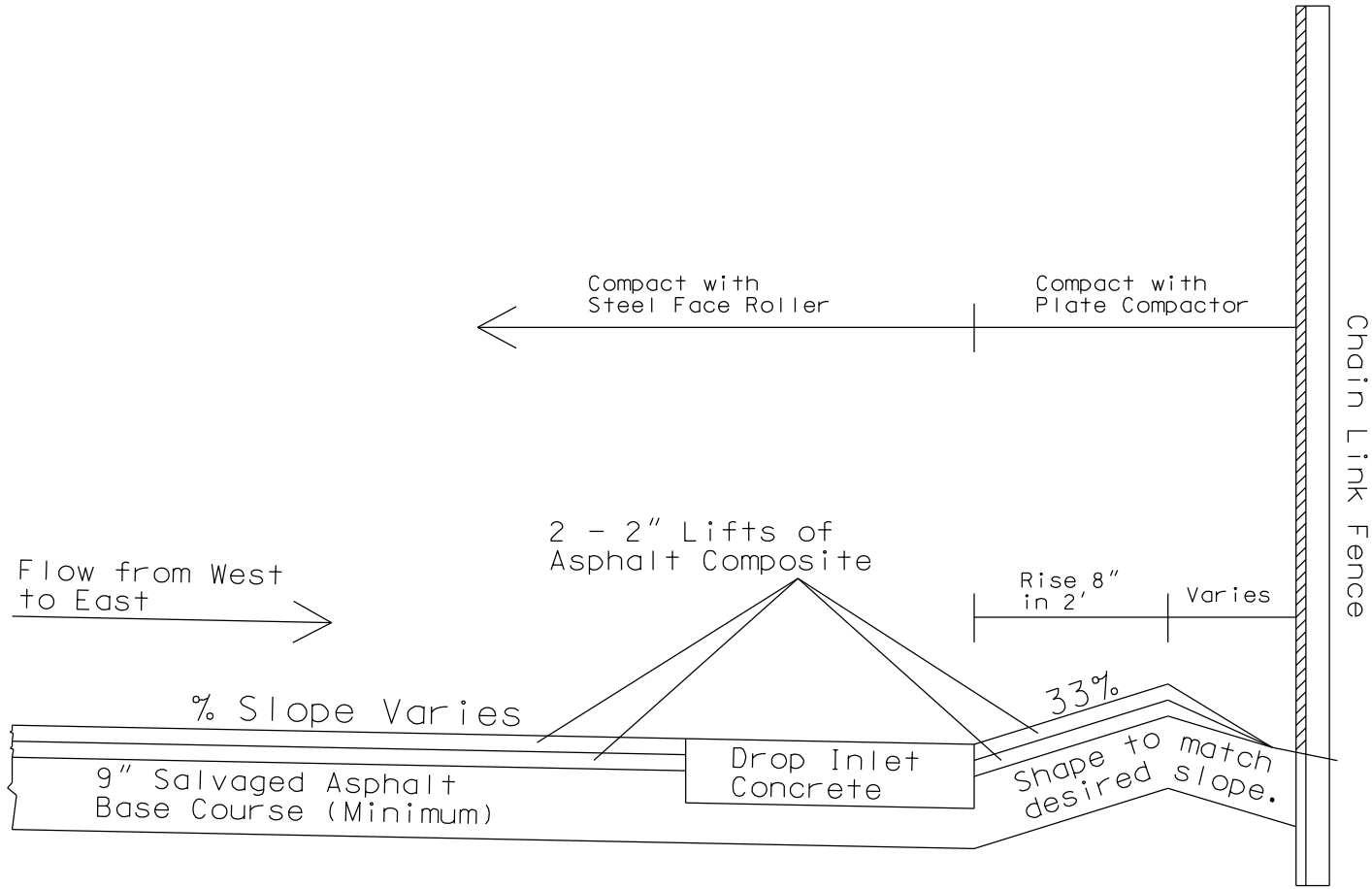
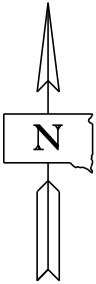
For information only: It is believed that the footings for the oil tank pedestals are 4’ deep x 3’ wide for the length of each footing.

The contractor shall also use reclaimed or salvaged asphalt base course to blend and shape the around the entire perimeter of the new asphalt surface. Shaping and compaction shall be done to the satisfaction of the Engineer.

The work performed to remove the concrete pedestals and shape reclaimed or salvaged asphalt base course around the new asphalt’s perimeter shall be paid for at the contract lump sum price for “Incidental Work”. Payment for this item shall include, but will not be limited to, all labor, tools, equipment, excavation, backfilling, compacting, disposal of debris, blading and shaping.

STATE OF SOUTH DAKOTA	PROJECT	SHEET NO.	TOTAL SHEETS
	411C414	6	12

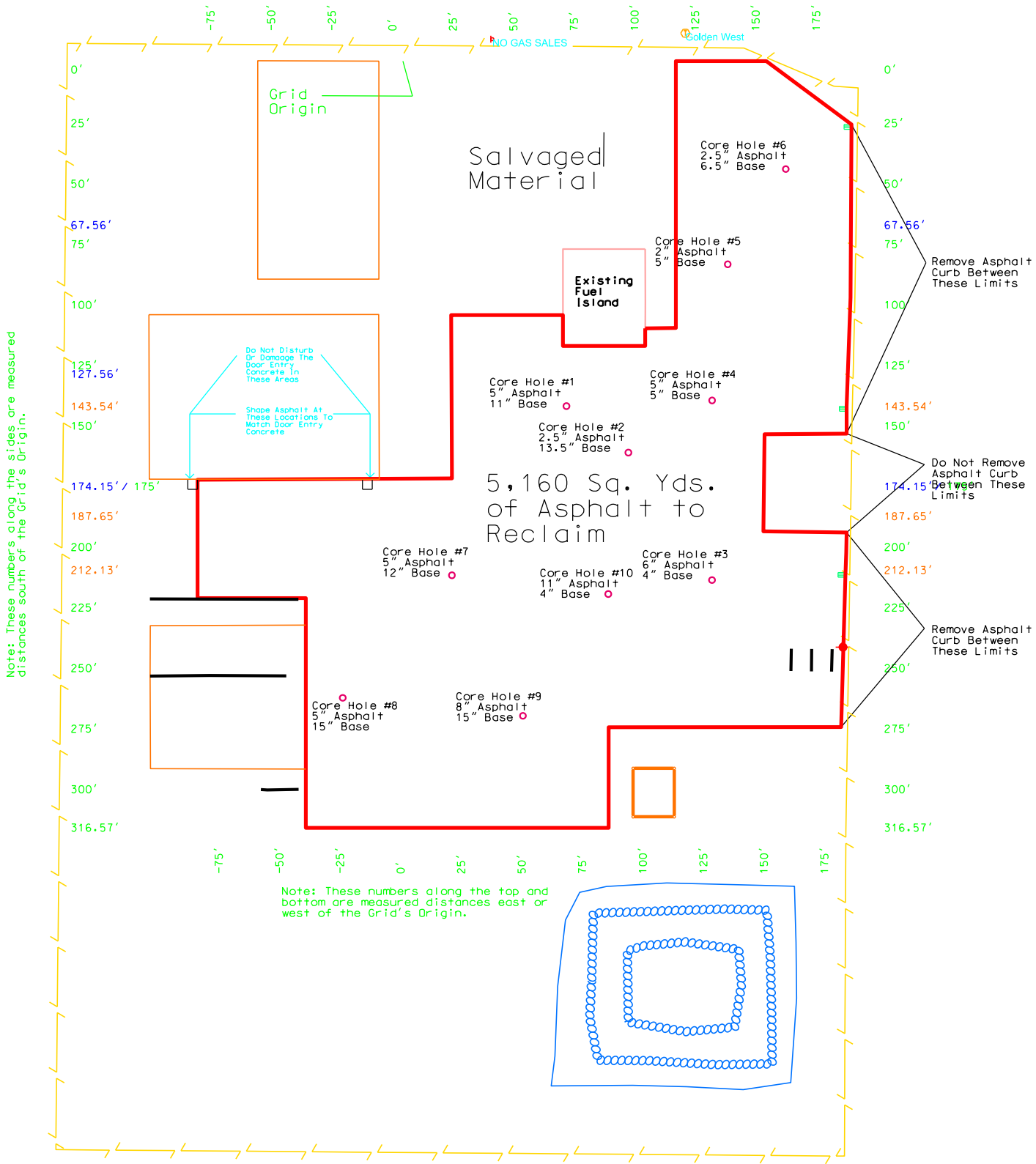
ASPHALT CURB REPLACEMENT DETAIL



Typical Section For The East Side Of The Yard.

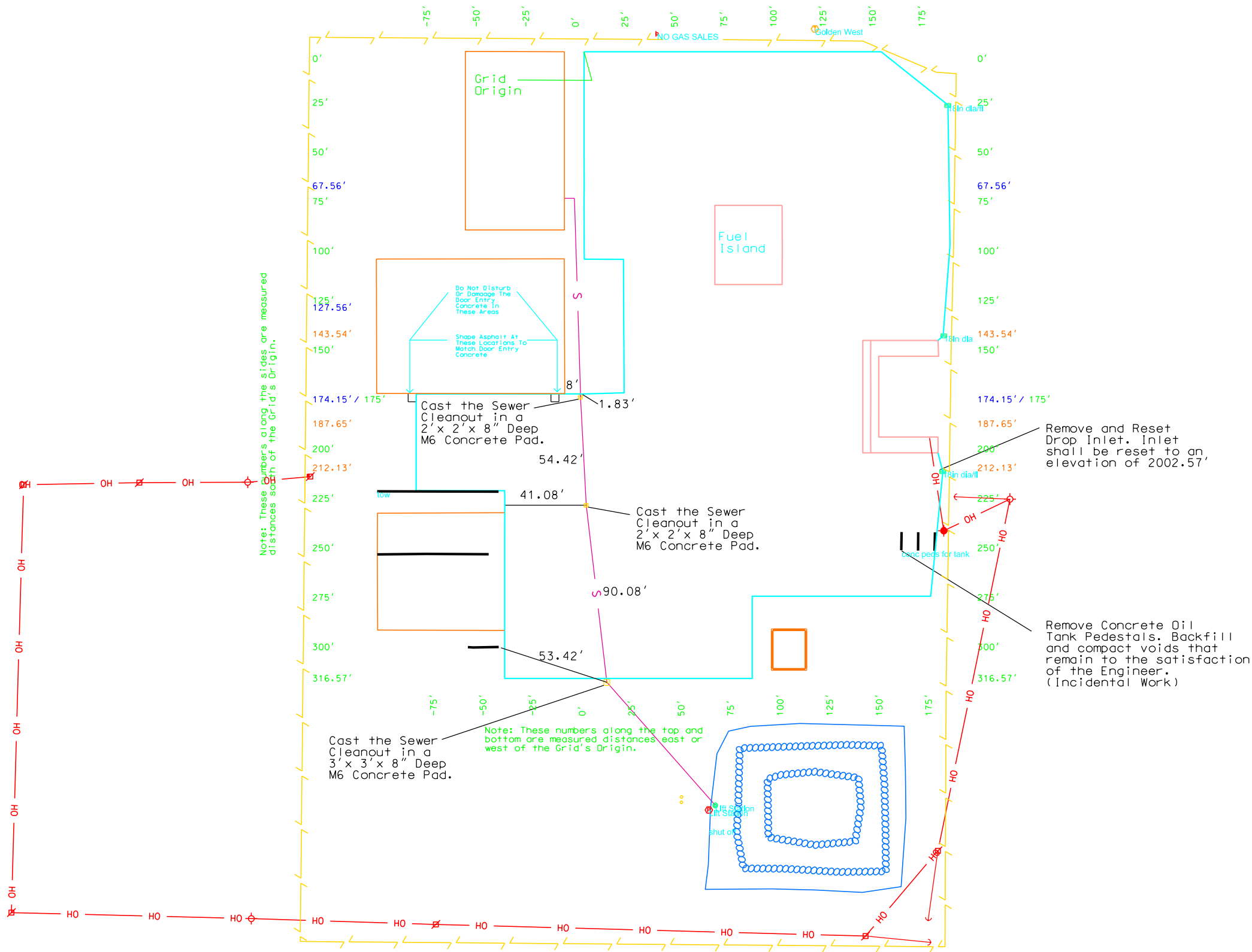
This typical is for the nearly 210' of length along the chain link fence on the east side of the yard. (130' north of the NE corner of the Old Salt Shed and 80' south of the SE corner) No work shall be done immediately east of the Old Salt Shed (which is 40' long). However, the work done beyond the building's limits shall be such that it allows the water accumulated on the east side of the building to drain to the north and the south.

RECLAIM ASPHALT
LIMITS



STATE OF SOUTH DAKOTA	PROJECT	SHEET NO.	TOTAL SHEETS
	411C414	8	12

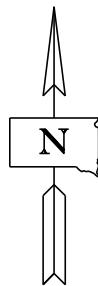
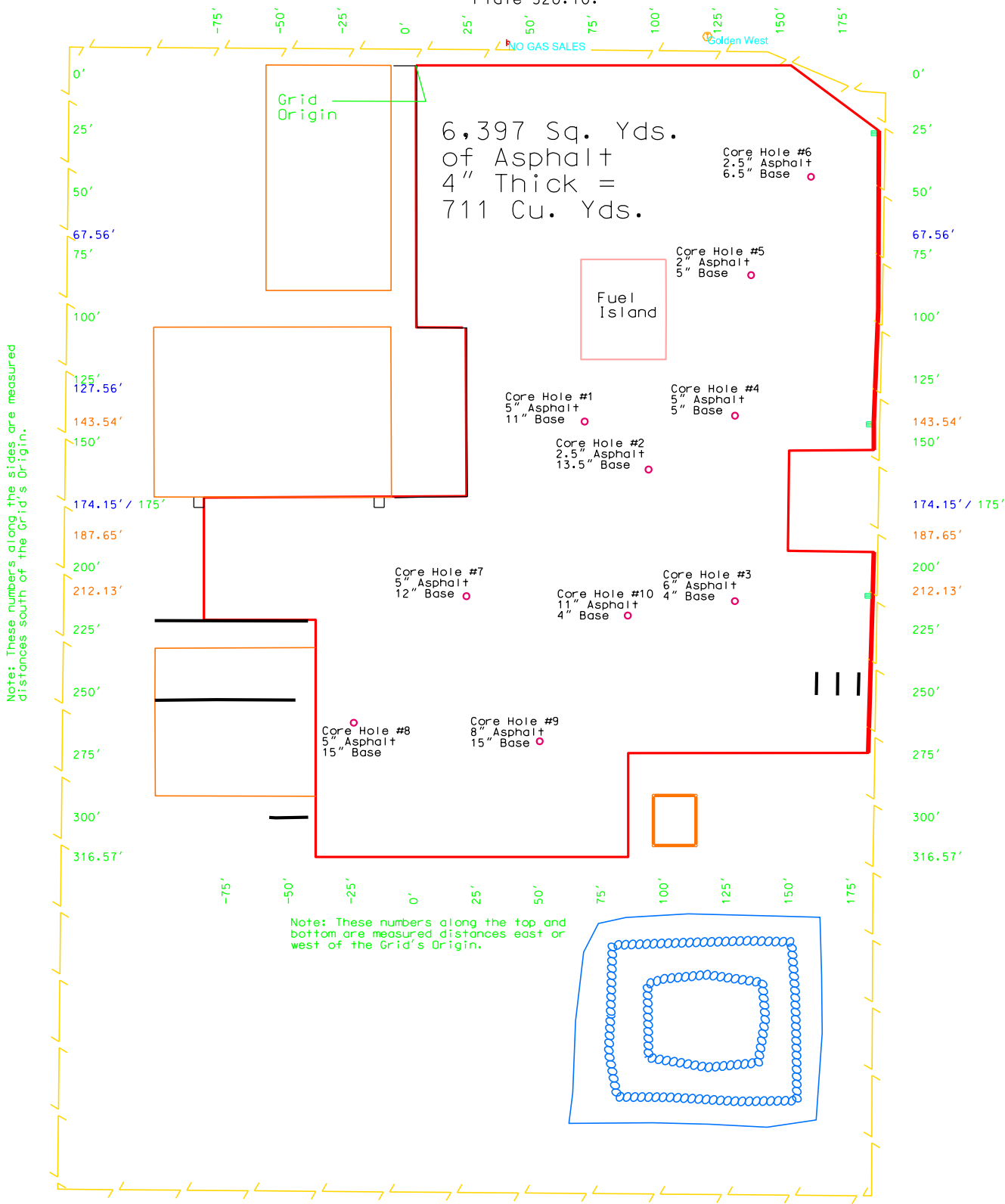
UTILITIES



ASPHALT PLACEMENT LIMITS

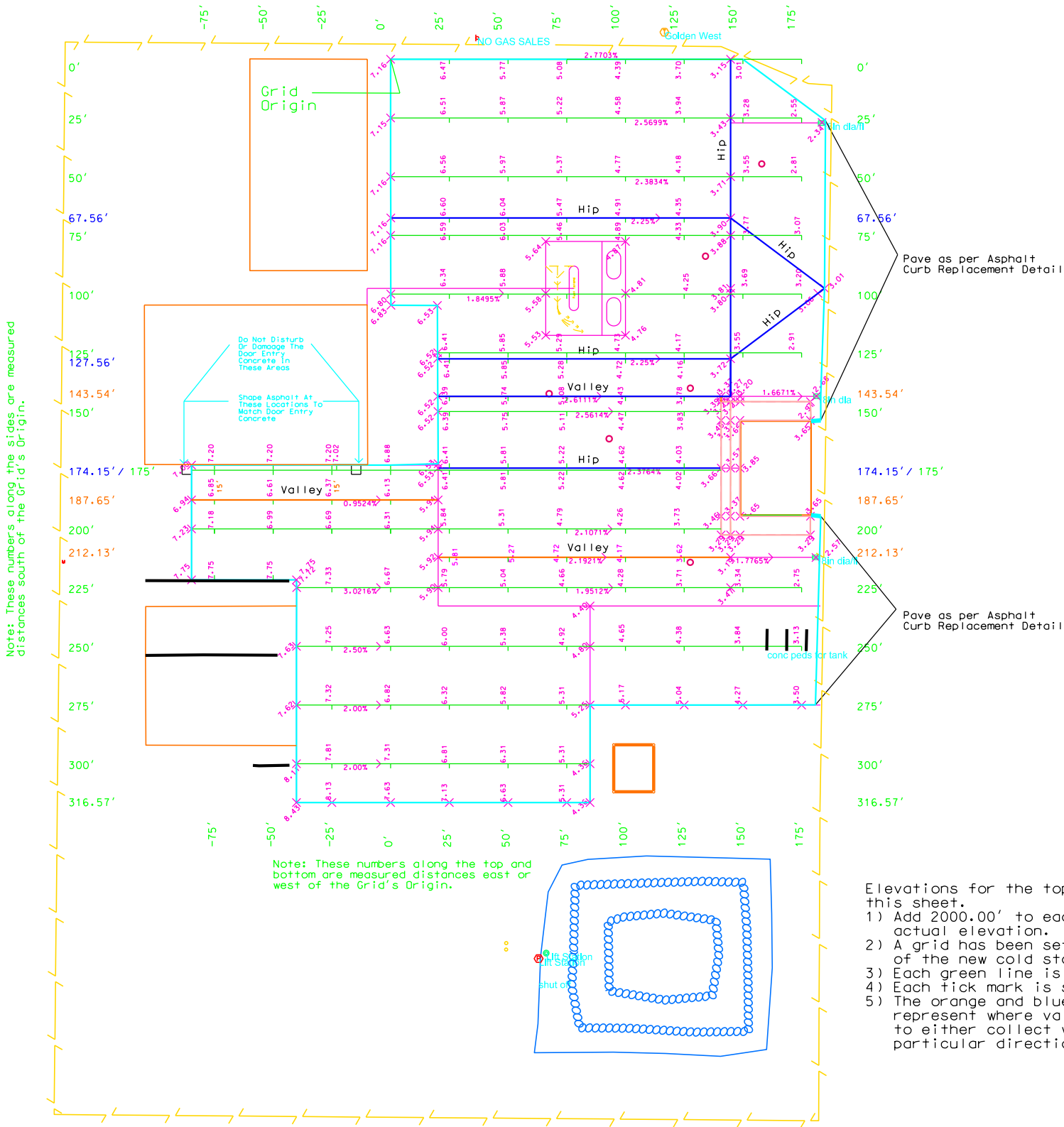
STATE OF SOUTH DAKOTA	PROJECT	SHEET NO.	TOTAL SHEETS
	411C414	9	12

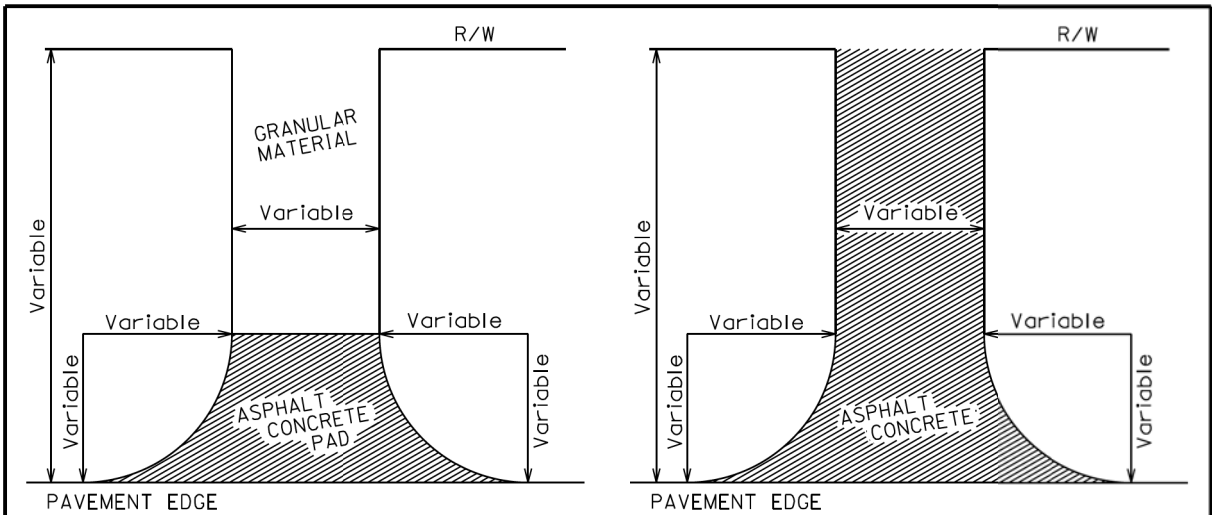
Place 2" asphalt
overlay on approach
as per Standard
Plate 320.10.



STATE OF SOUTH DAKOTA	PROJECT	SHEET NO.	TOTAL SHEETS
	411C414	10	12

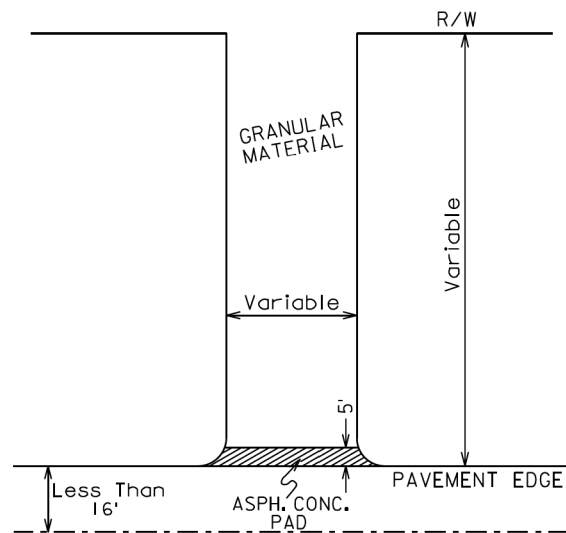
ELEVATIONS FOR THE TOP OF THE NEW ASPHALT





INTERSECTING ROAD
NO ASPHALT CONCRETE SURFACING
BEYOND R/W

INTERSECTING ROAD
ASPHALT CONCRETE SURFACING
BEYOND R/W



ENTRANCE

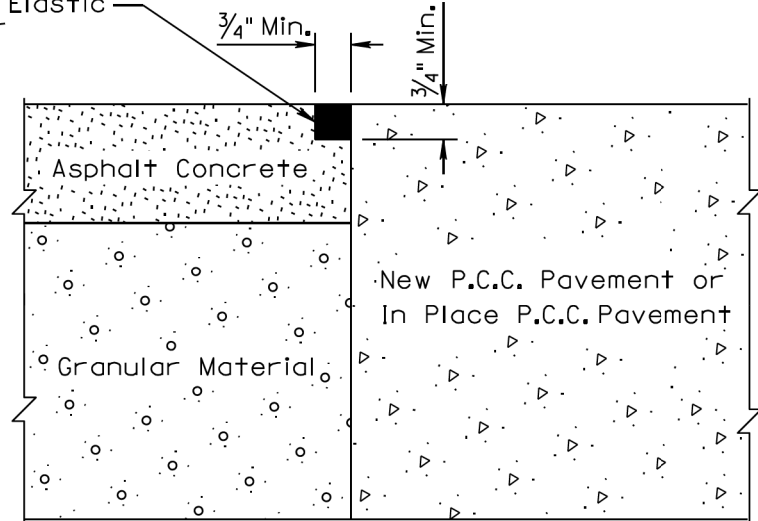
The surfacing details shown on this sheet are provided as a guide for surfacing these facilities. The precise construction limits for situations other than the standards shown will be determined by the Engineer, at the time of construction.

ROADWAY WITH OR WITHOUT SHOULDER

March 31, 2000

Published Date: 2nd Qtr. 2016	S D D O T	RESURFACING OF INTERSECTING ROADS AND ENTRANCES	PLATE NUMBER 320.10
			Sheet 1 of 1

Hot Poured Elastic
Joint Sealer



March 31, 2000

Published Date: 2nd Qtr. 2016	S D D O T	ASPHALT CONCRETE SHOULDER JOINT ADJACENT TO PCC PAVEMENT	PLATE NUMBER 320.15
			Sheet 1 of 1